



Odtwarzacz DVD / Magnetowid VHS

VC-8716

VC-8816

SECTION 1

SUMMARY

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PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMER INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

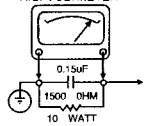
SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED, A CHECK SHOULD BE MADE OF THE FOLLOWING:

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT FOR THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS, FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY. FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES. DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS, HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST. USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER: CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150V A.C. TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS A.C. ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.

A.C. VOLTMETER



SUBJECT: GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

SUBJECT: X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T. ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS X-RAY SHIELD IN COLOR SETS. ALWAYS RE-INSTALL THEM.
3. IT IS ESSENTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD, SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED, THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE, AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV. B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE APPLICABLE).

SUBJECT: IMPLSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTEGRAL IMPLSION PROTECTION SYSTEM, BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION, AVOID SCRATCHING THE TUBE IF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBY-HOLE OR CLOSELY FITTING SHELF SPACE OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM. BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.S. OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS. EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

SERVICING PRECAUTIONS

CAUTION : Before servicing the VCR+DVD covered by this service data and its supplements and addends, read and follow the SAFETY PRECAUTIONS. NOTE : if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions. Remember Safety First.

General Servicing Precautions

1. Always unplug the VCR+DVD AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.**Caution :** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this VCR+DVD or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator. Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this VCR+DVD and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

SPECIFICATIONS

DVD PART

Power supply	AC 200~240V, 50 Hz
Power consumption	19W
Mass	5.4kg
External dimensions	430 x 97.5 x 360 (W x H x D)
Signal system	PAL 625/50, NTSC 525/60
Laser	Semiconductor laser, wavelength 650nm
Frequency range (digital audio)	4 Hz to 20 kHz
Signal-to-noise ratio (digital audio)	More than 100 dB (EIAJ)
Audio dynamic range (digital audio)	More than 100 dB (EIAJ)
Harmonic distortion(digital audio)	0.008%
Wow and flutter	Below measurable level (less than +0.001%(W.PEAK)) (EIAJ)
Operations	Temperature : 5°C(41°F) to 35°C(95°F), Operation status : Horizontal

OUTPUTS

Video outputs	1.0V(p-p), 75Ω, negative sync., RCA jack x 1/SCART(TO TV)
S video outputs	(Y)1.0V(p-p), 75Ω, negative sync.,Mini DIN 4-pin x 1 (C)0.3V(p-p), 75Ω
Component video output	(Y) 1.0 V (p-p), 75 Ω, negative sync., RCA jack x 1 (Pb)/(Pr) 0.7 V (p-p), 75 Ω
Audio output(digital audio)	0.5V(p-p), 75Ω, RCA jack X 1/SCART(TO TV)
Audio output(optical audio)	Optical connector x 1
Audio output(analog audio)	2.0Vrms (1kHz, 0dB), 330Ω, RCA jack (L, R) x 1 / SCART(TO TV)

VHS PART

Video Head System	Double azimuth 4 heads, helical scanning
Tape format	Tape width 12.7 mm (0.5 inch)
Timer	24 hours display type

*Designs and specifications are subject to change without notice.

*Weight and dimensions shown are approximate.

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CABINET & MAIN CHASSIS
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1. Cabinet and Main Frame Section



Diagram illustrating the components of the Sony CCD-1000 camera, including optional parts. The components are labeled as follows:

- ★ (806) CABLE, COAXIAL
- (811) PLUG ASSY 1WAY(YELLOW)
- (812) PLUG ASSY 2WAY(RED/WHITE)
- ★ (813) PLUG ASSY 1WAY(BLACK)
- ★ (808) BATTERY
- (900) REMOCON
- (803) PACKING
- (802) BOX CARTON
- ★ (821) SCART CABLE
- (801) INSTRUCTION ASSEMBLY
- (804) BAG
- (803) PACKING
- ★ OPTIONAL PARTS

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VCR PART ELECTRICAL ADJUSTMENT PROCEDURES

1. Servo Adjustment

- 1) PG Adjustment
• Test Equipment

a) OSCILLOSCOPE C) PAL MODEL : PAL SP TEST TAPE

b) NTSC MODEL : NTSC SP TEST TAPE

• Adjustment And Specification

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
PLAY	V.Out H/SW(TP)	R/C TRK JIG KEY	6.5 ± 0.5H

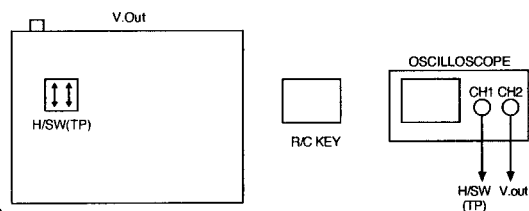
• Adjustment Procedure

- a) Insert the SP Test Tape and play.
Note - Adjust the distance of X, pressing the Tracking(+) or Tracking(-) when the "ATR" is blink after the SP Test Tape is inserted.
b) Connect the CH1 of the oscilloscope to the H/SW(TP) and CH2 to the Video Out for the VCR.
c) Trigger the mixed Combo Video Signal of CH2 to the CH1 H/SW(TP), and then check the distance (time difference), which is from the selected A(B) Head point of the H/SW(TP) signal to the starting point of the vertical synchronized signal, to 6.5H ± 0.5H (412μs, 1H=63μs).

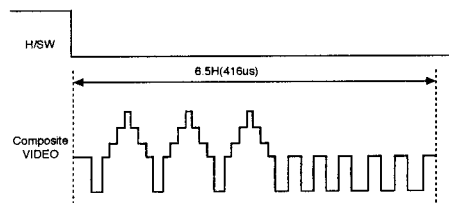
• PG Adjustment Method

- a-1) Playback the SP standard tape
b-2) Press the "1" key on the Remote controller and the "PLAY" key on the Front Panel the same time, then it goes in to Tracking initial mode.
c-3) Repeat the above step(No.b-2), then it finishes the PG adjusting automatically.
d-4) Stop the playback, then it goes out to PG adjusting mode after many the PG data.

• CONNECTION

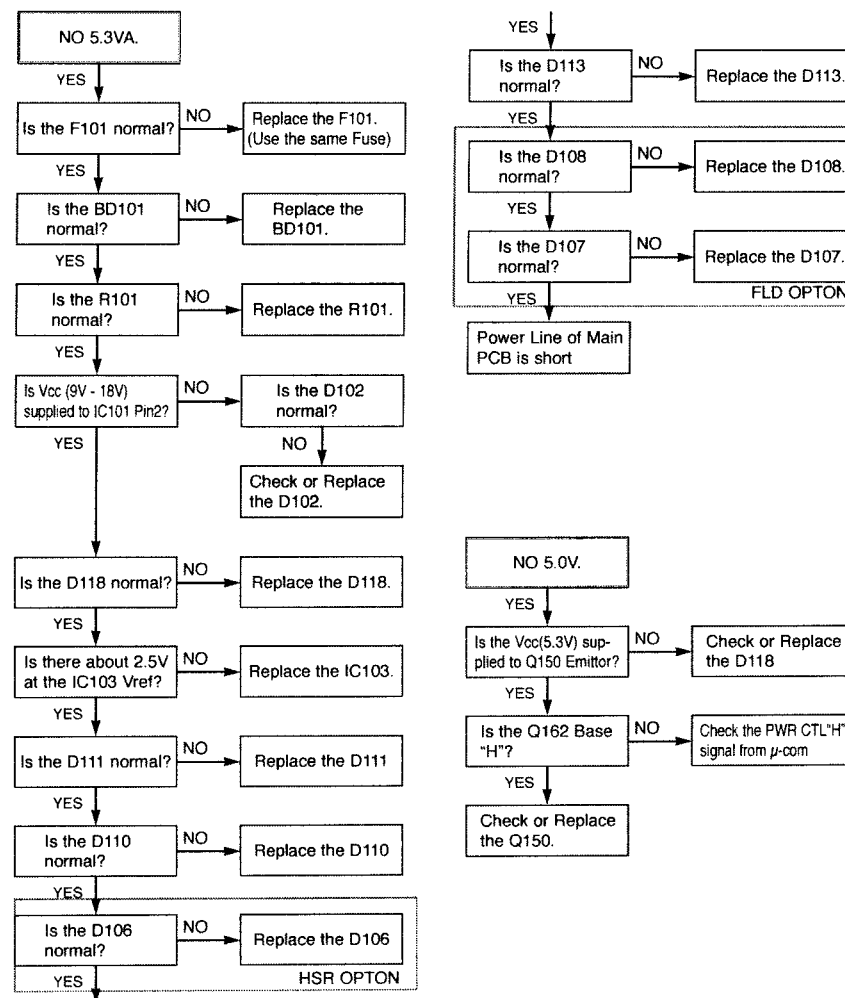


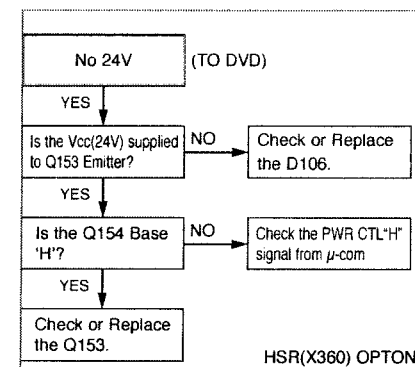
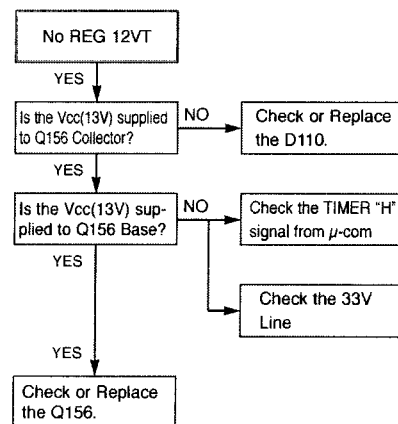
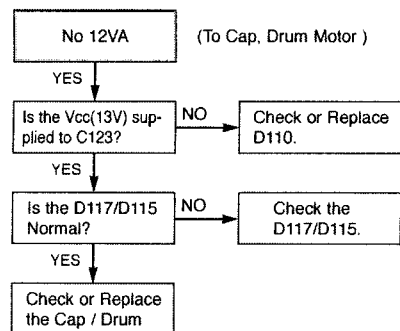
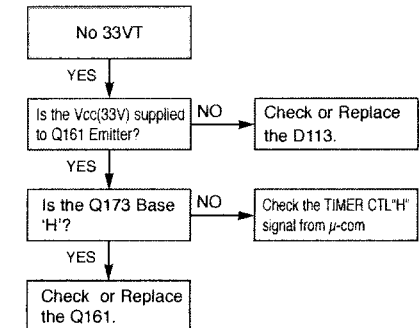
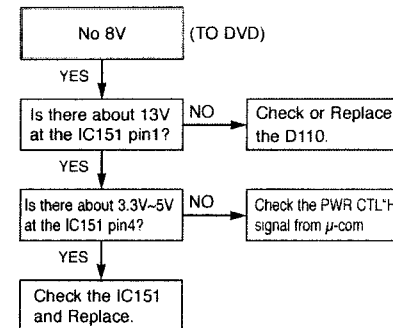
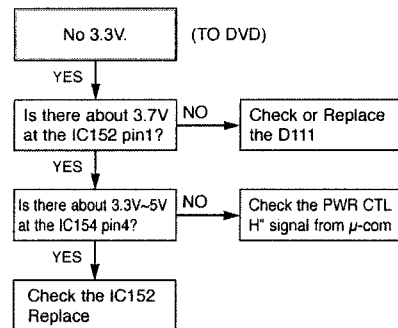
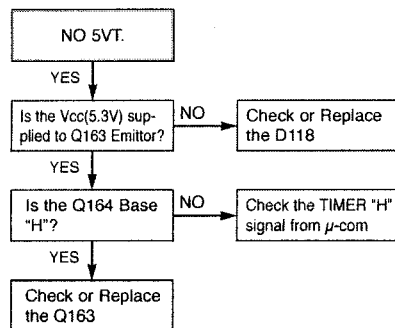
• WAVEFORM



ELECTRICAL TROUBLESHOOTING GUIDE

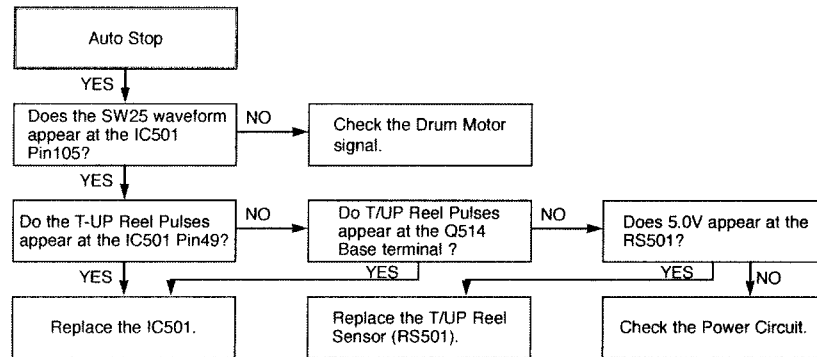
1. Power(SMPS) CIRCUIT



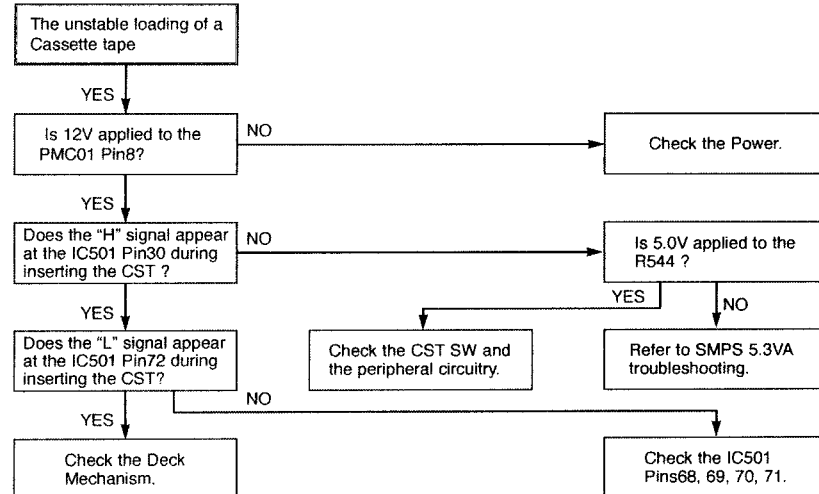


2. SYSTEM/KEY CIRCUIT

(1) AUTO STOP



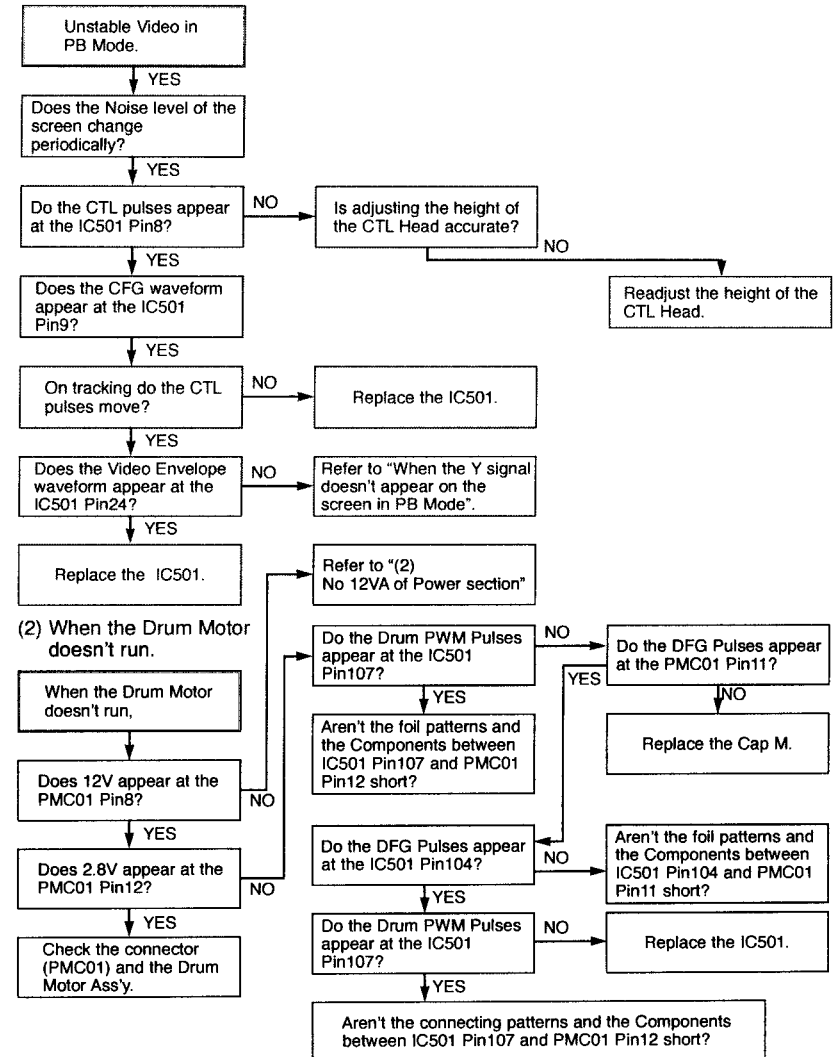
(2) The unstable loading of a Cassette tape



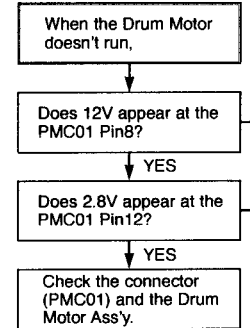
Caution : Auto stop can occur because Grease or Oil is dried up

3. SERVO CIRCUIT

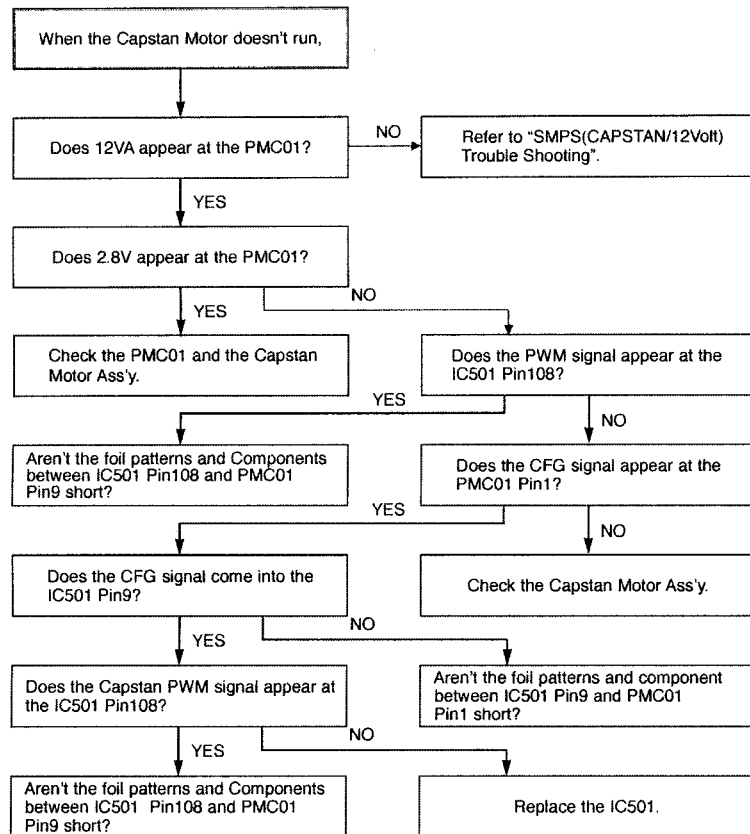
(1) Unstable Video in PB MODE



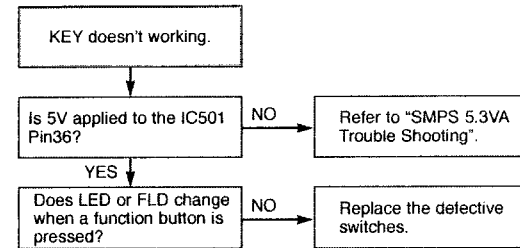
(2) When the Drum Motor doesn't run.



(3) When the Capstan Motor doesn't run,

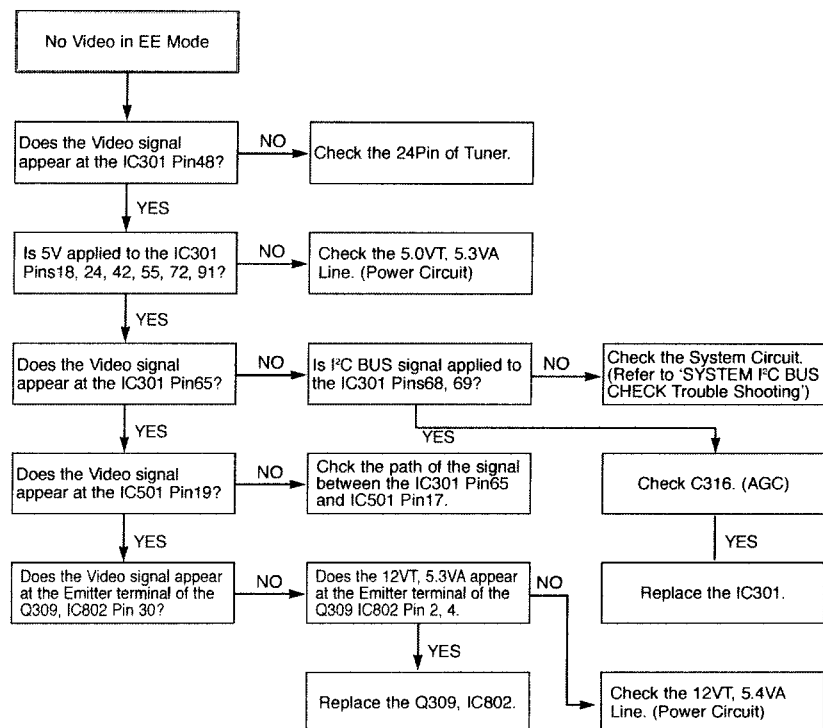


(4) KEY doesn't working

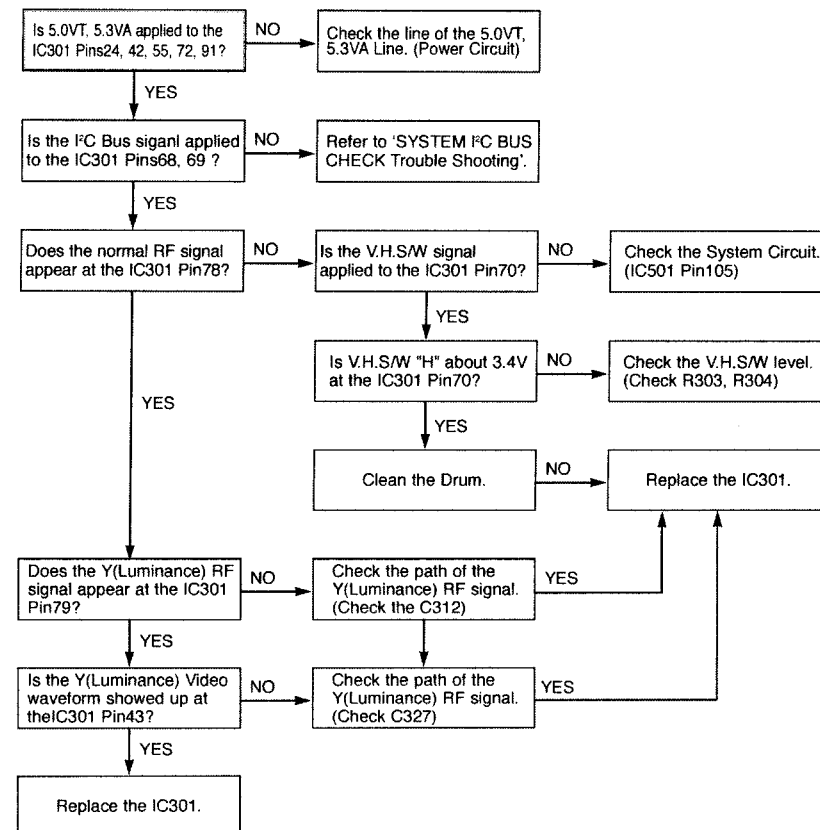


4. Y/C CIRCUIT

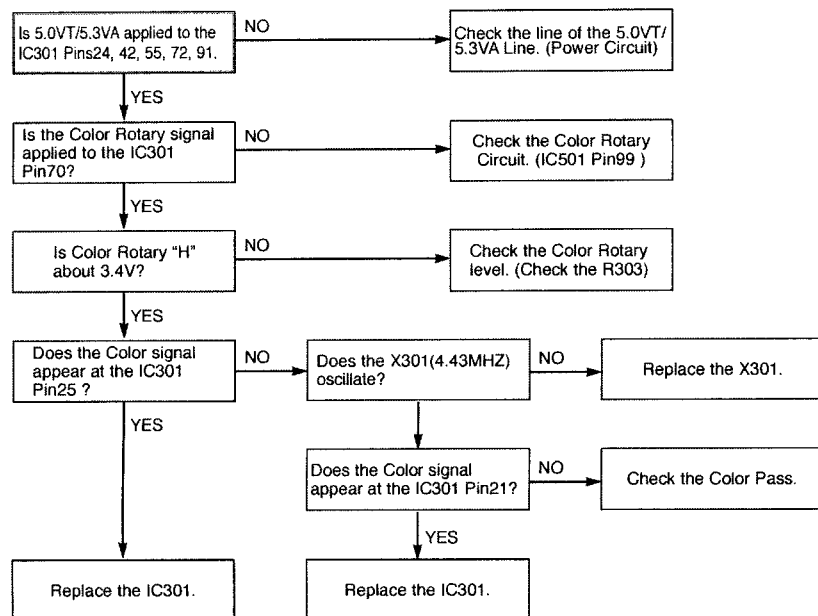
(1) No Video in EE Mode,



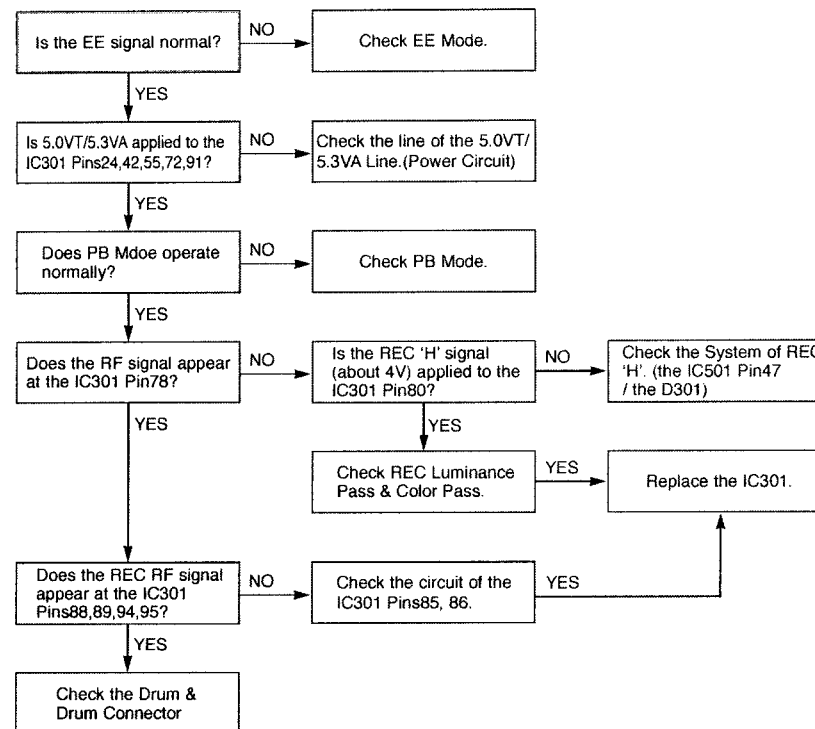
(2) When the Y(Luminance) signal doesn't appear on the screen in PB Mode,



(3) When the C(Color) signal doesn't appear on the screen in PB Mode,

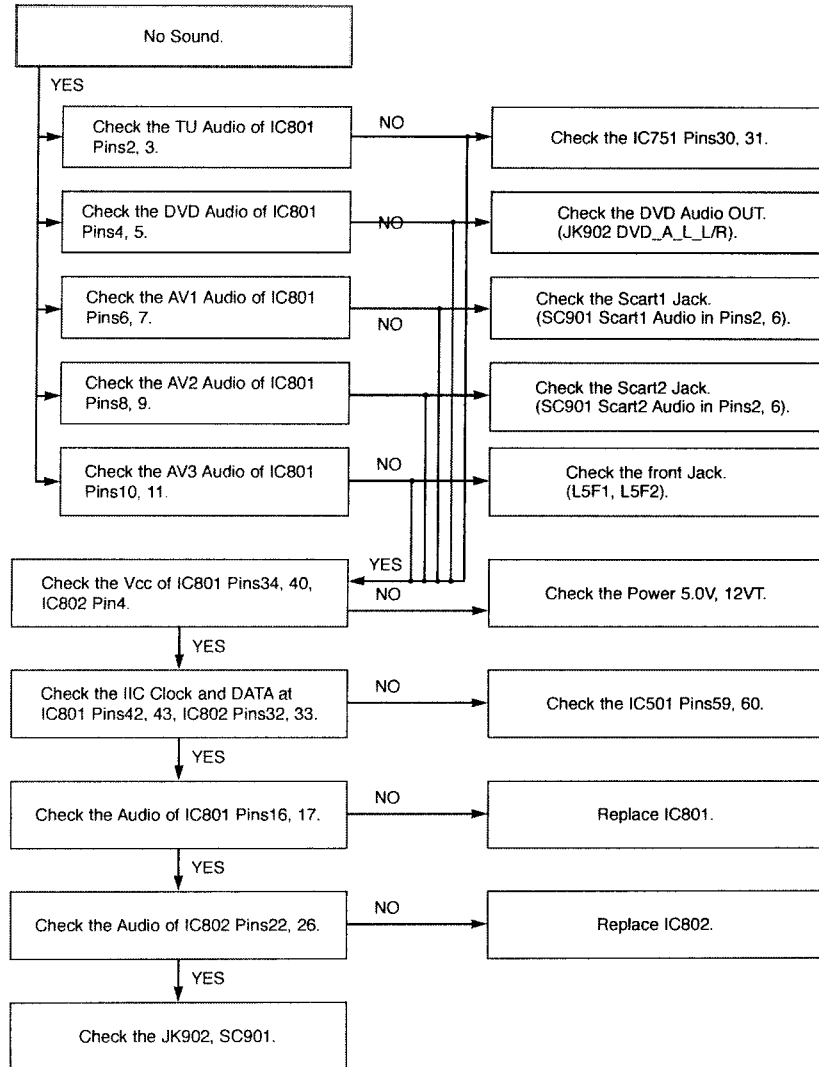


(4) When the Video signal doesn't appear on the screen in REC Mode,



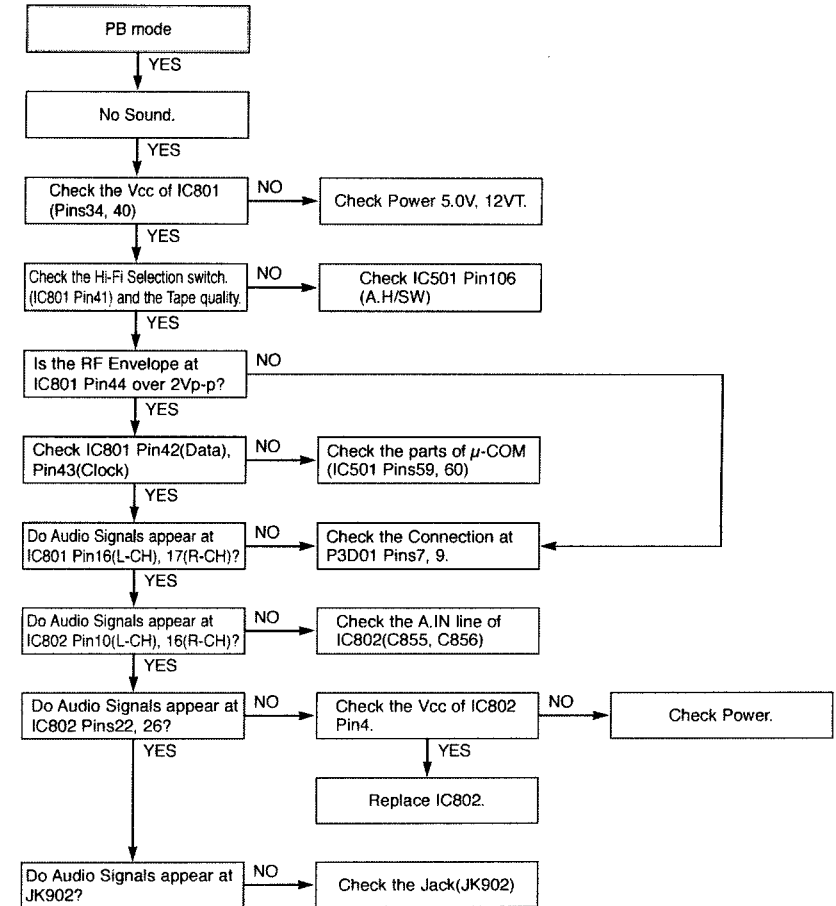
5. HI-FI CIRCUIT

(A) No Sound(EE Mode)



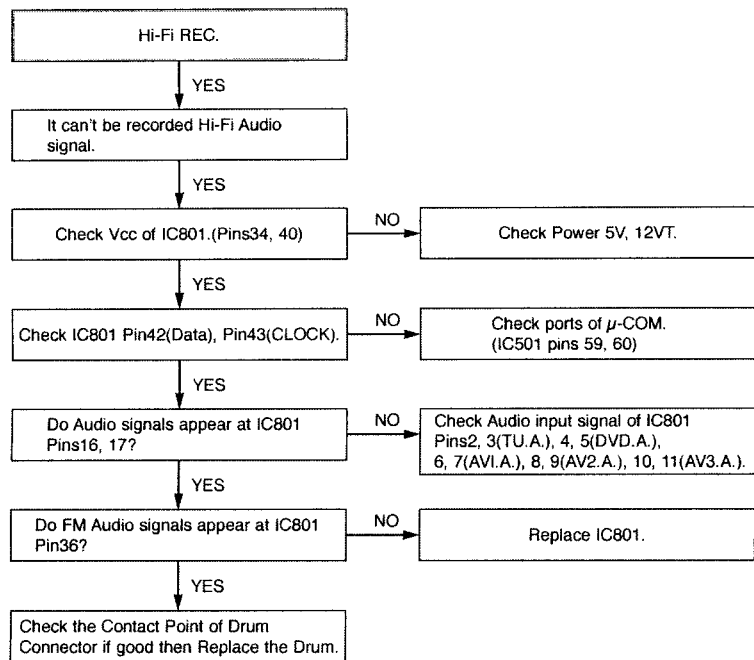
3-15

(B) Hi-Fi Playback



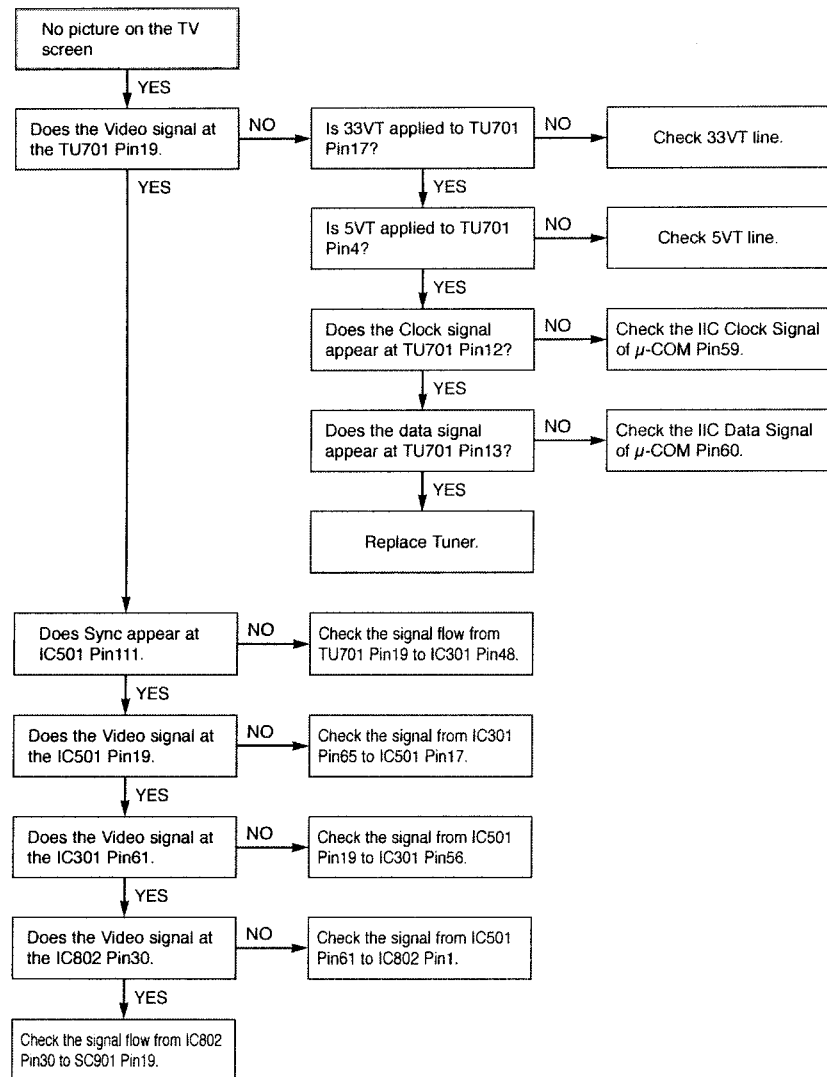
3-16

(C)

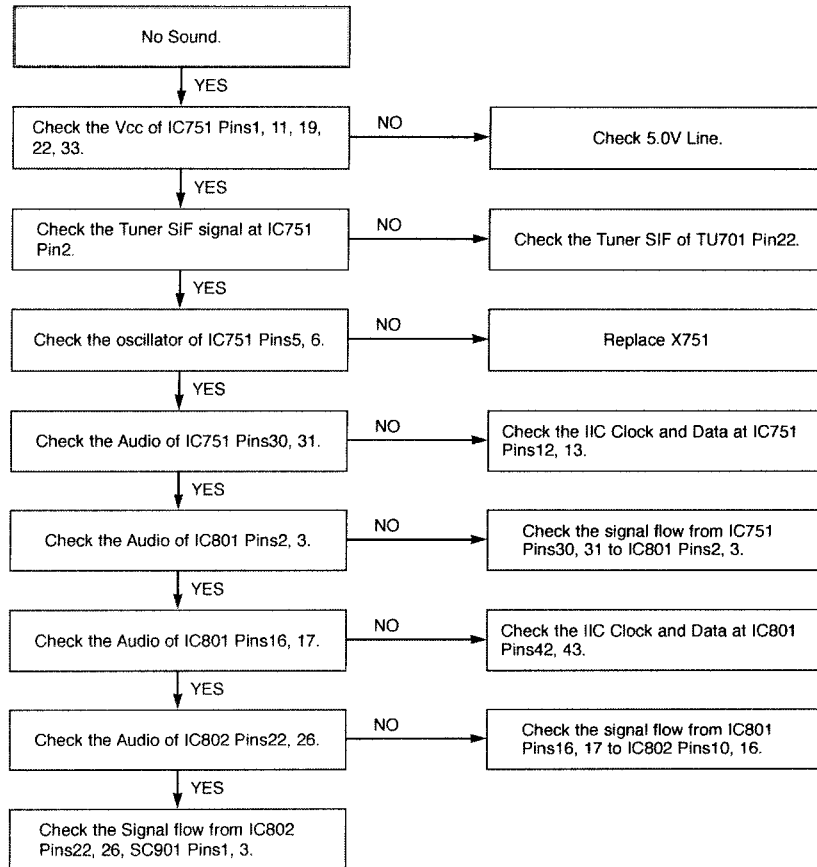


6. Tuner/IF CIRCUIT

(A) No Picture on the TV screen

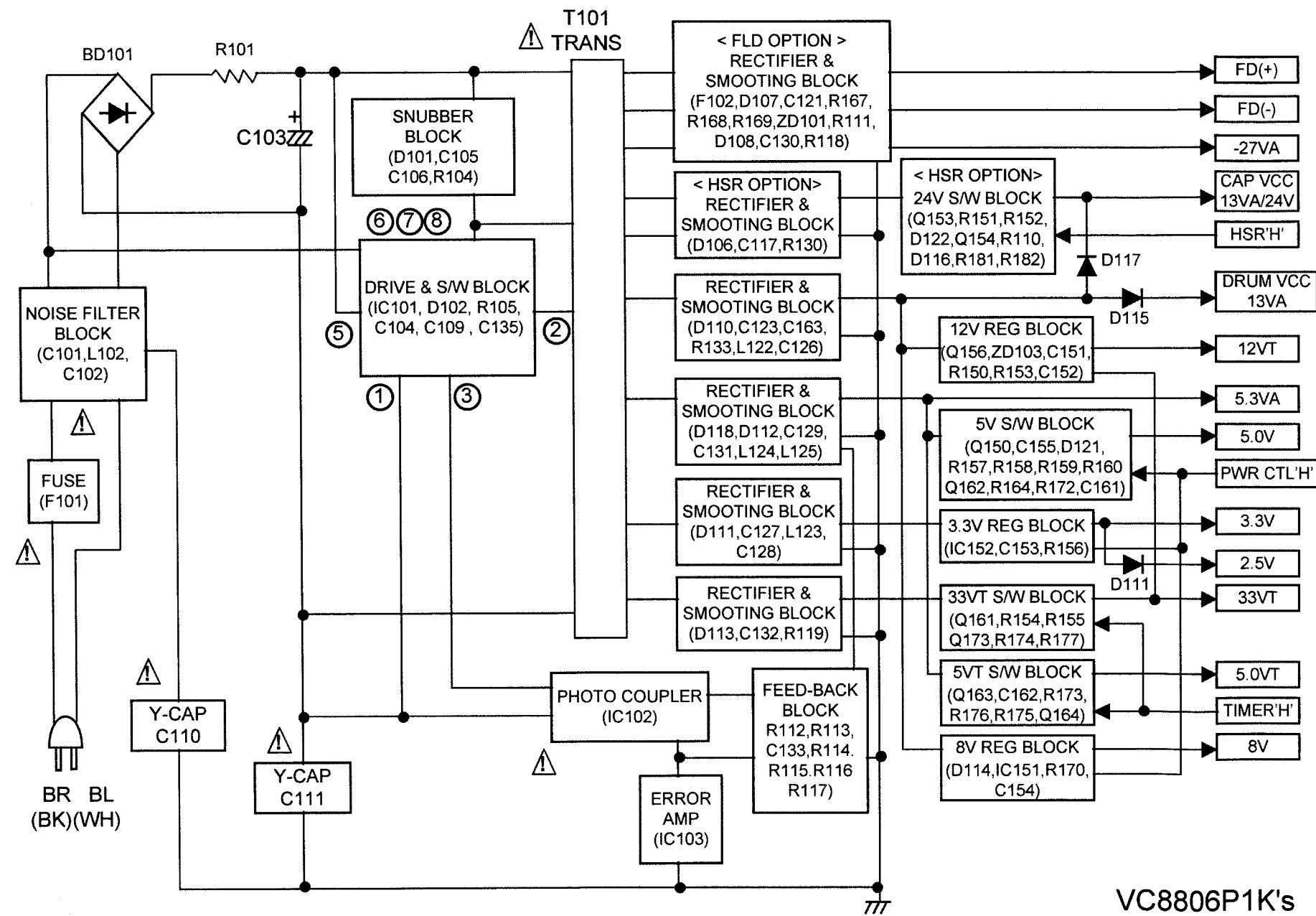


(B) No Sound

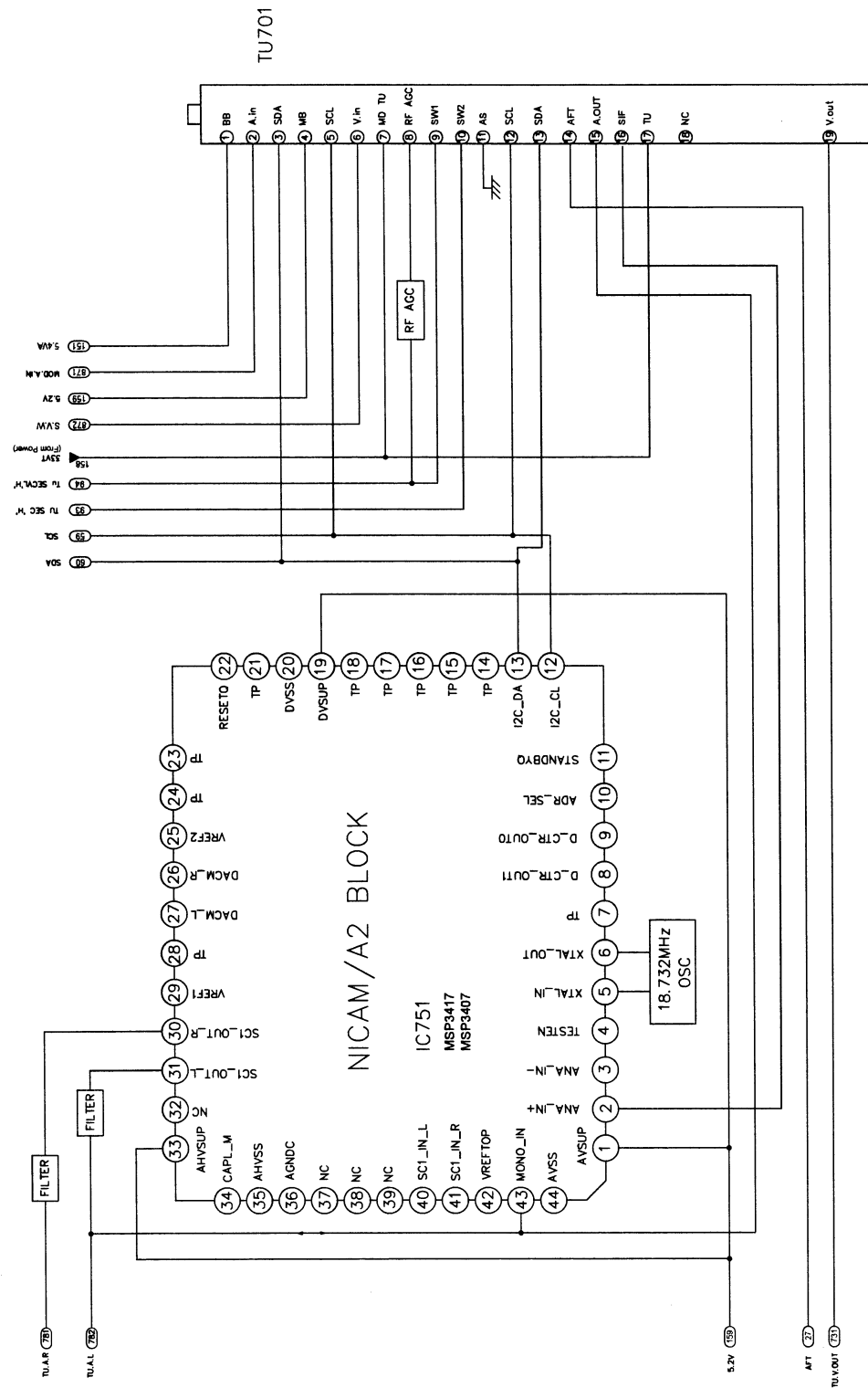


BLOCK DIAGRAMS

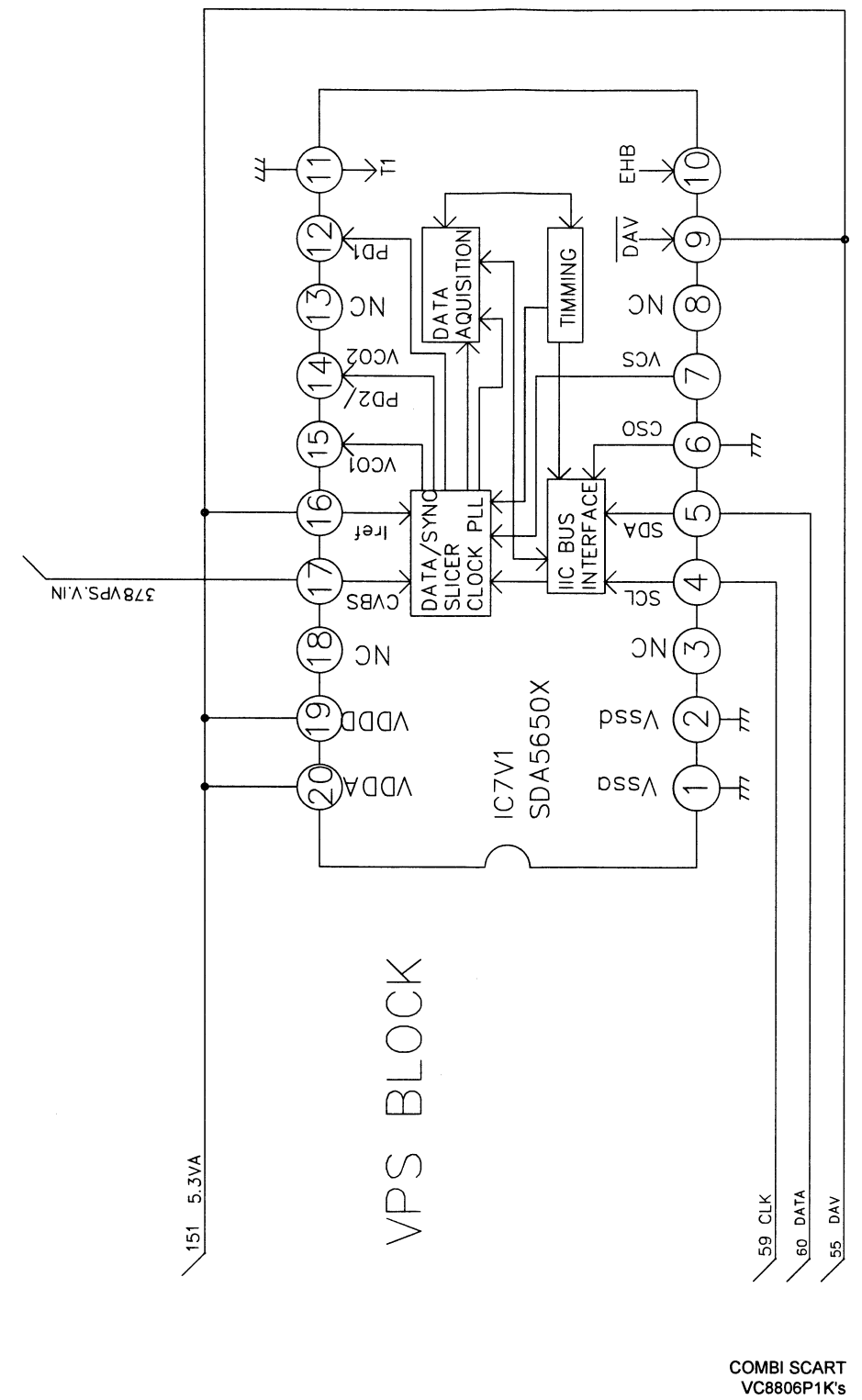
1. POWER(SMPS) BLOCK DIAGRAM



2. Tu/IF, NICAM & A2 BLOCK DIAGRAM

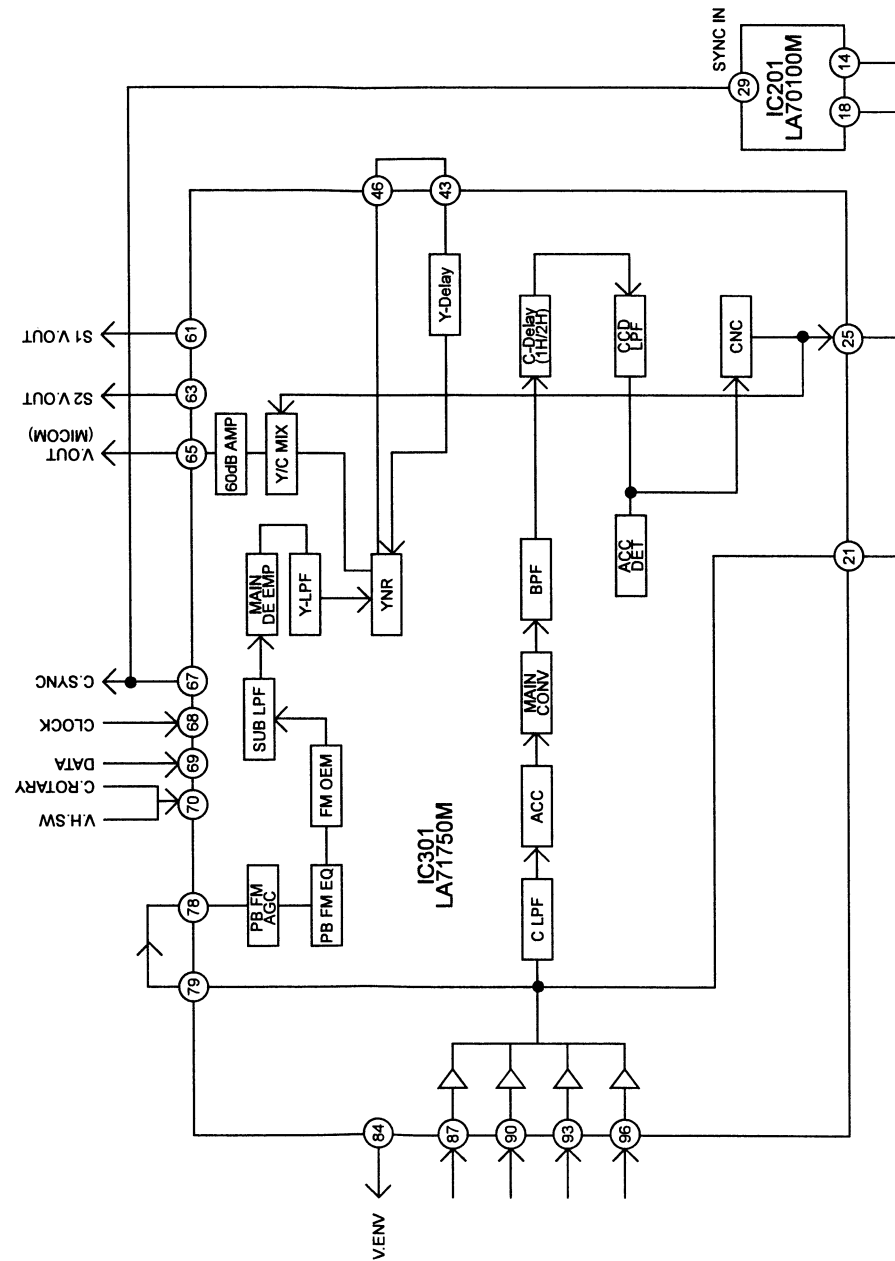


3. VPS BLOCK DIAGRAM

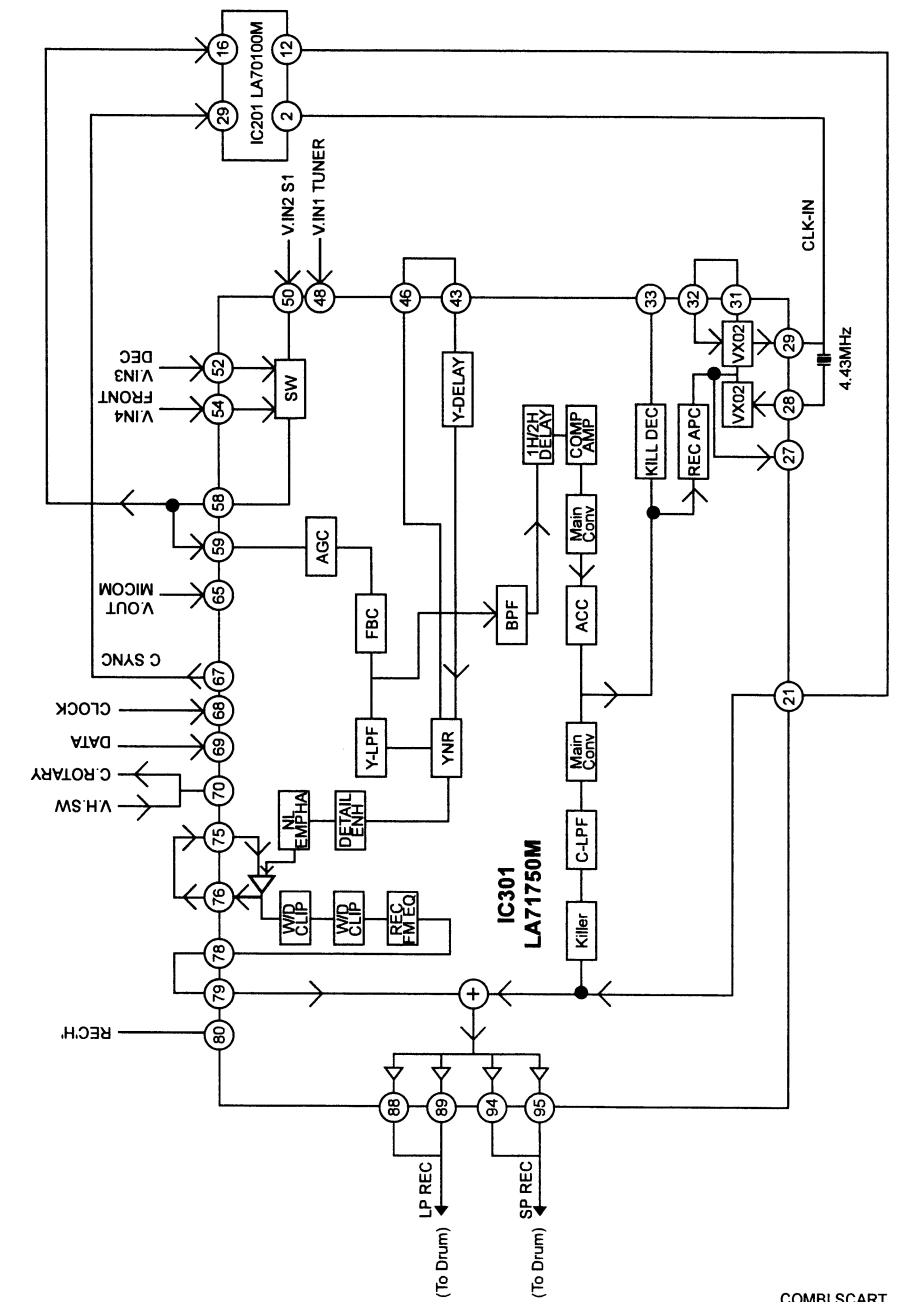


4. Y/C BLOCK DIAGRAM

(PB MODE)

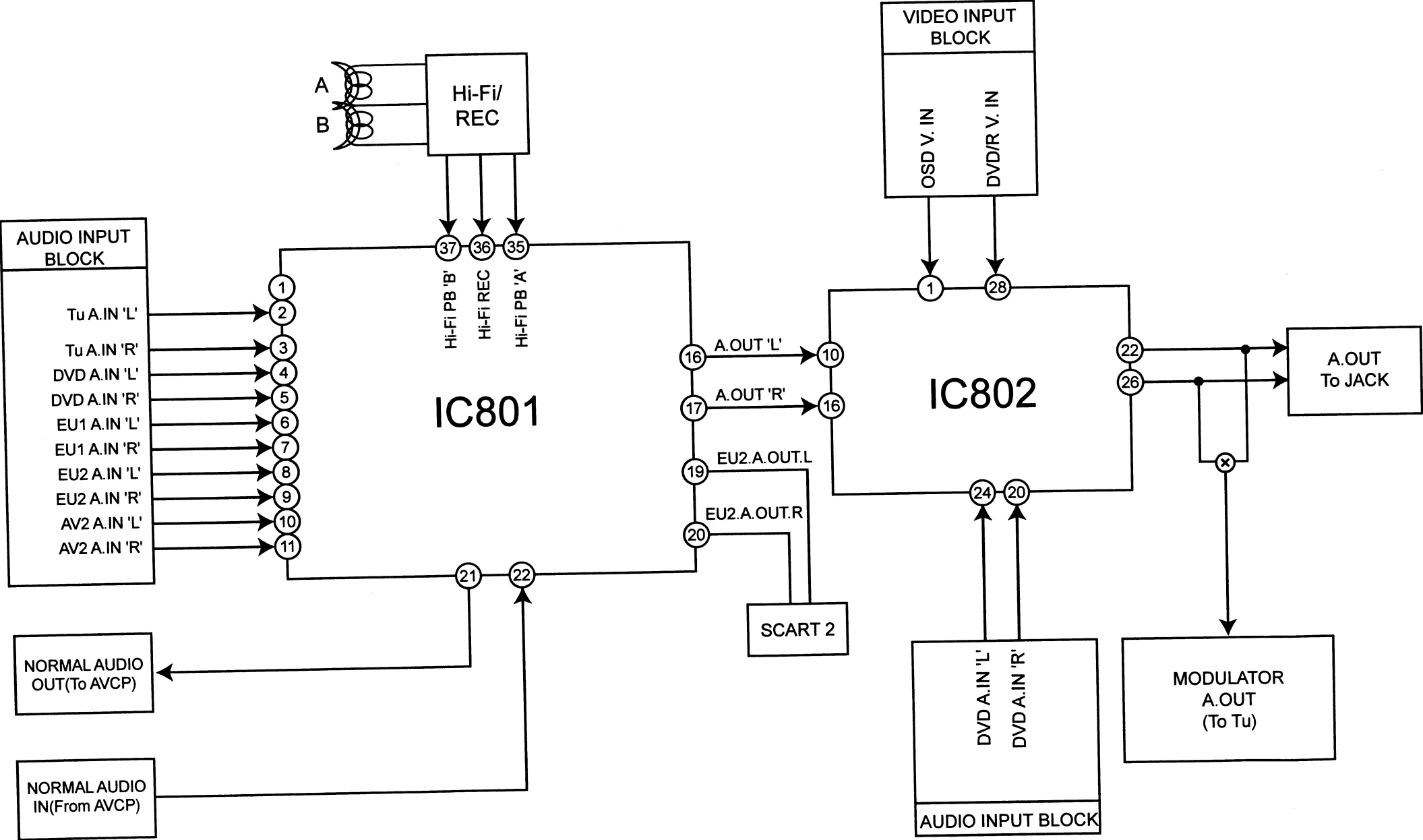


(REC MODE)



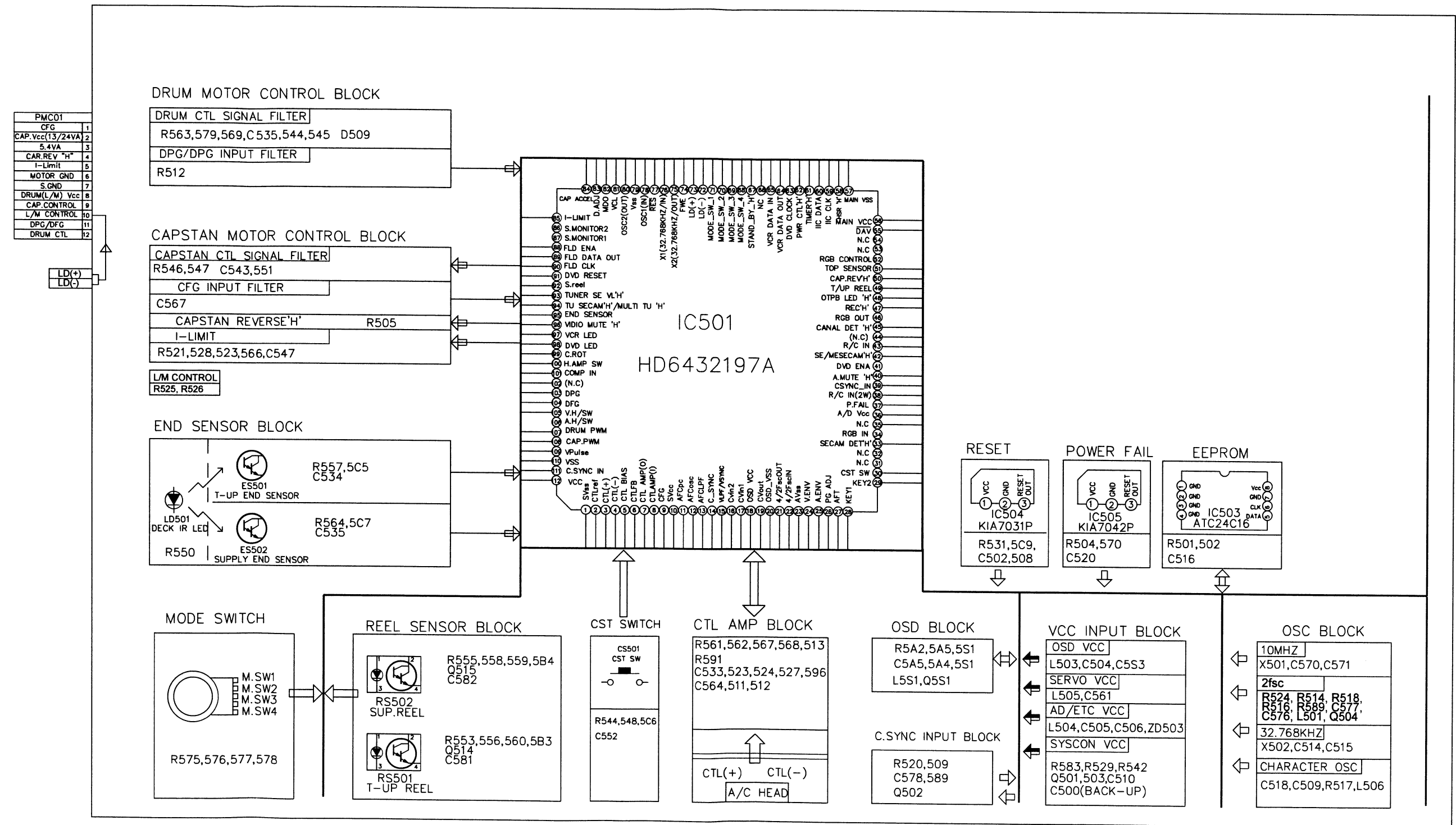
COMBI SCART
VC8806P1K's

5. Hi-Fi BLOCK DIAGRAM



COMBI SCART
VC8806P1K's

6. SYSTEM BLOCK DIAGRAM



COMBI SCART
VC8806P1K's

CIRCUIT DIAGRAMS

1. POWER(SMPS) CIRCUIT DIAGRAM 1

IMPORTANT SAFETY NOTICE

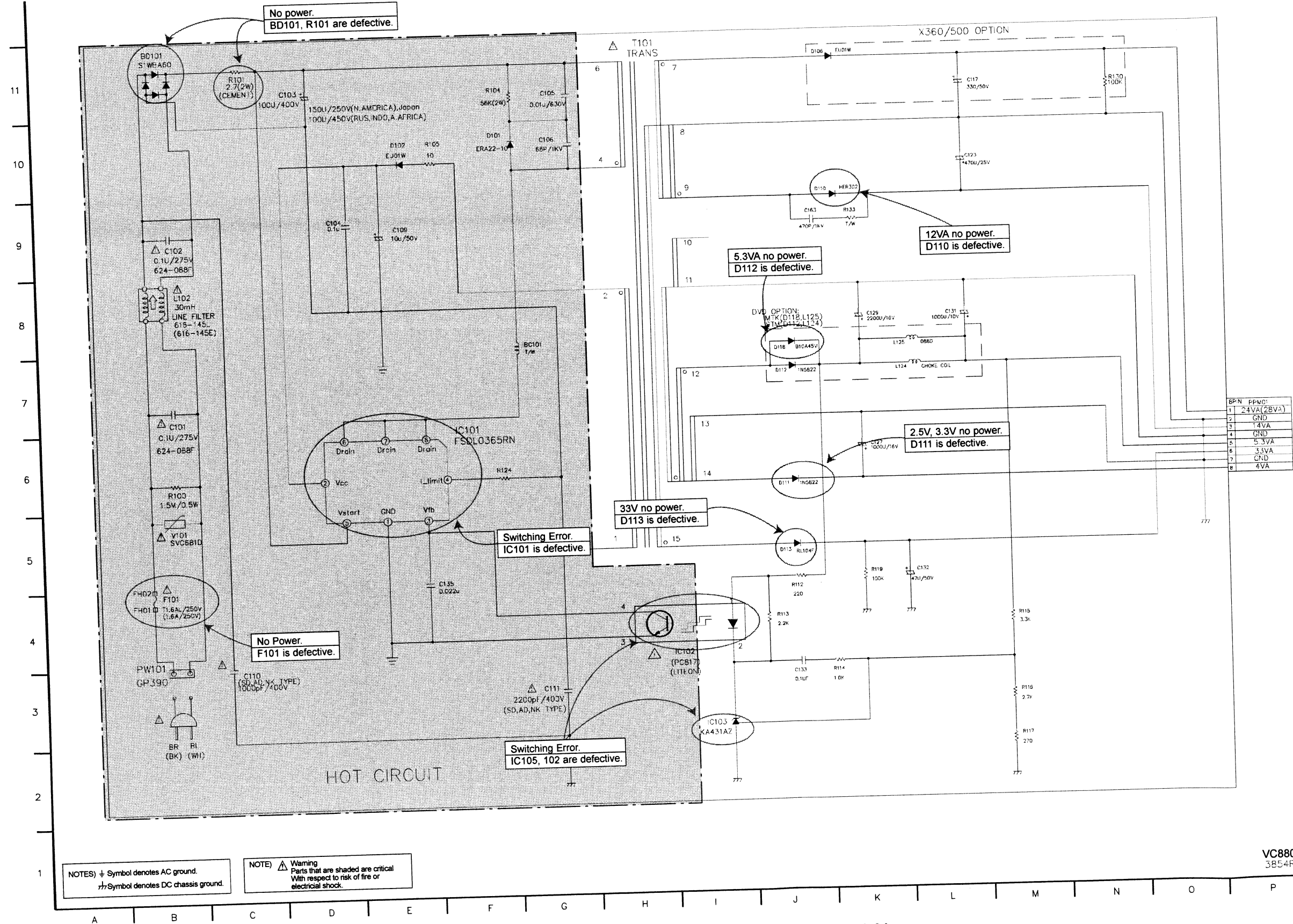
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE LG ELECTRONICS CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIR-

CUIT. SPECIAL COMPONENTS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION. THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

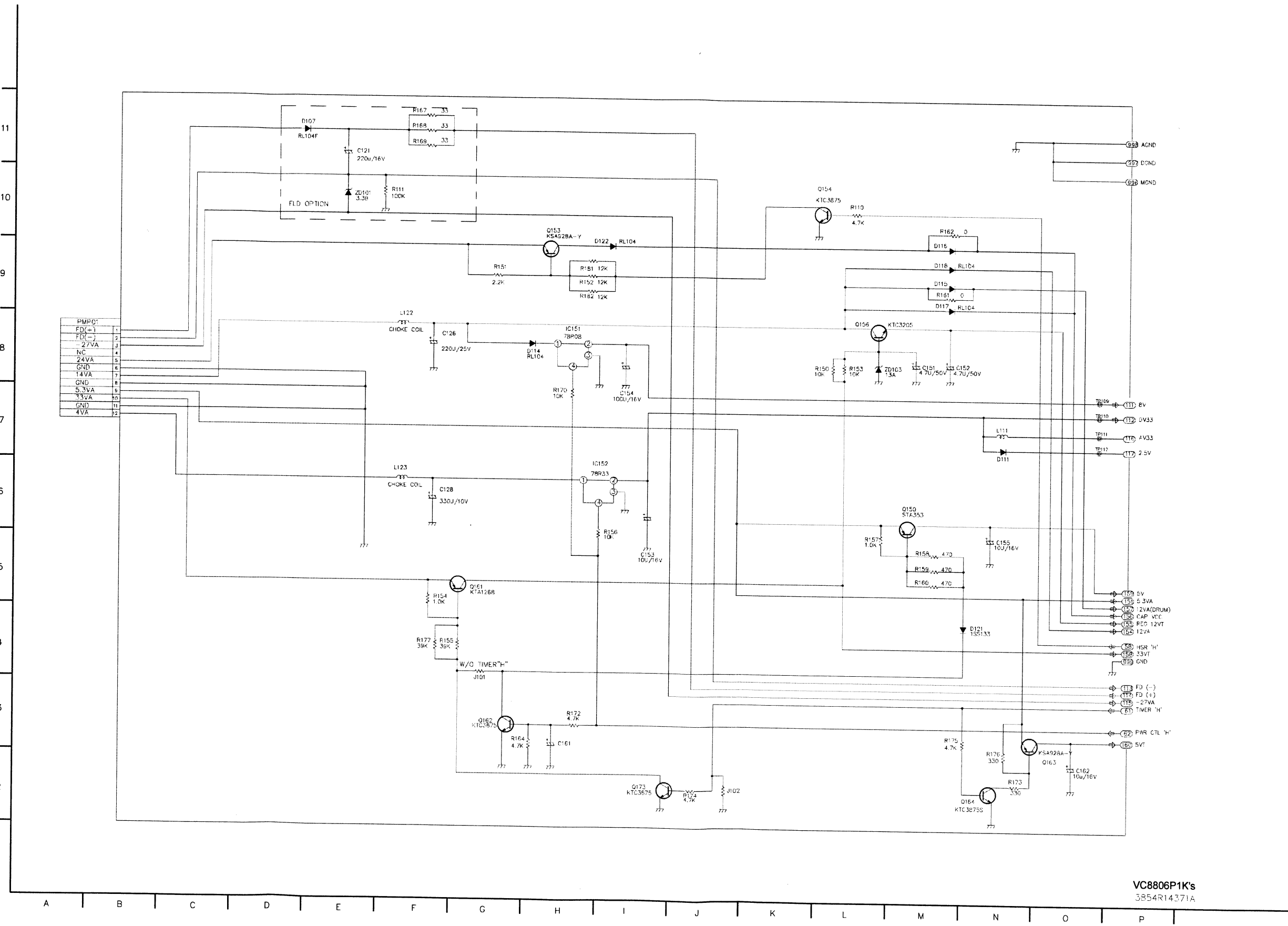
NOTE :

1. Shaded(■) parts are critical for safety. Replace only with specified part number.

2. Voltages are DC-measured with a digital voltmeter during Play mode.



2. POWER(SMPS) CIRCUIT DIAGRAM 2



VPS BLOCK

IC7V1 SDA5650X

IC751 MSP3417 MSP3407

NICAM/A2 BLOCK

TUNER BLOCK

Pinout Table:

Pin	IC751	IC702
1	S	0
2	CKI	1.5K

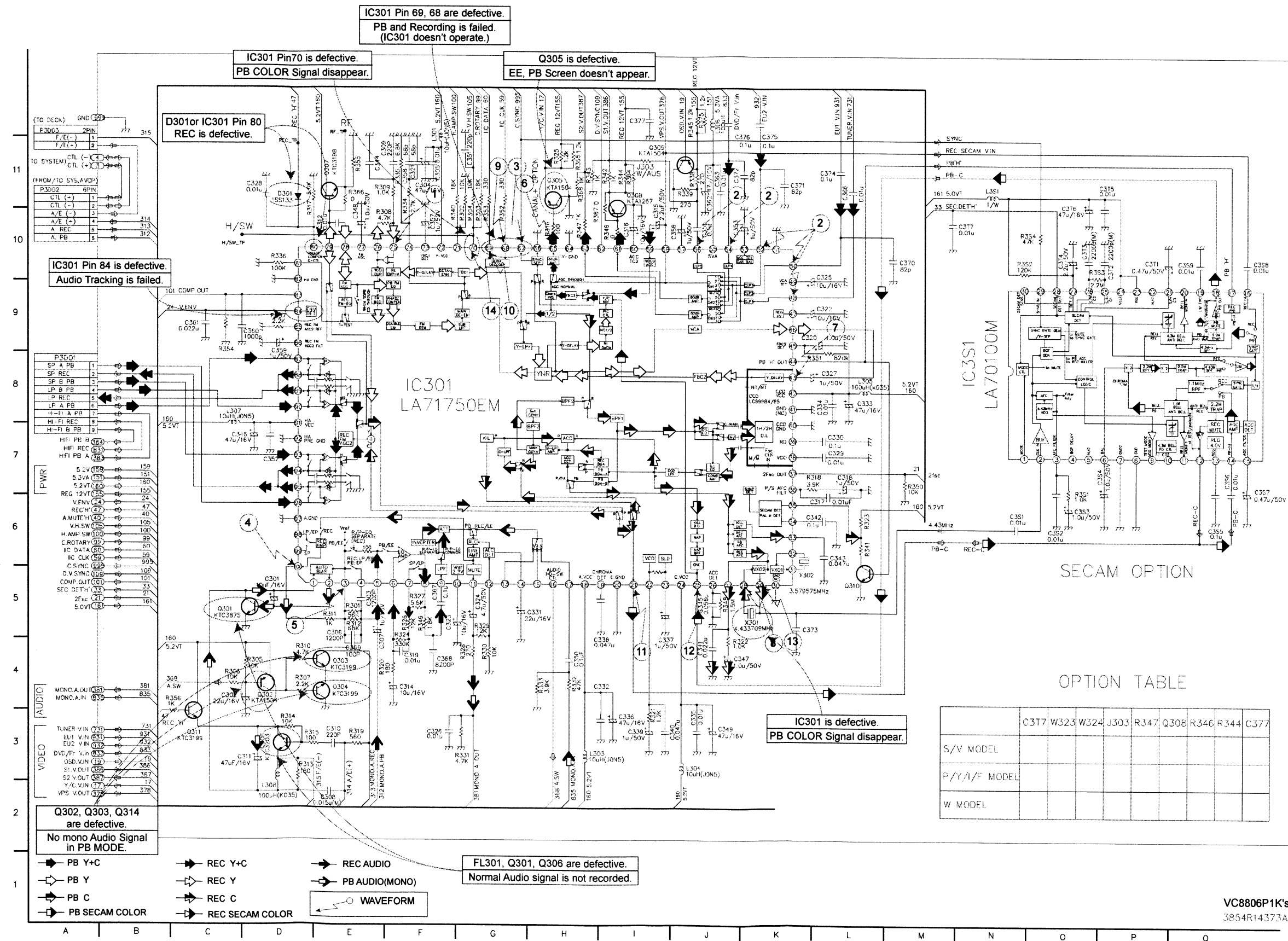
Legend:

- EE MODE (VIDEO)
- TU MODE (AUDIO)

VC8806P1K's
3854R14375A

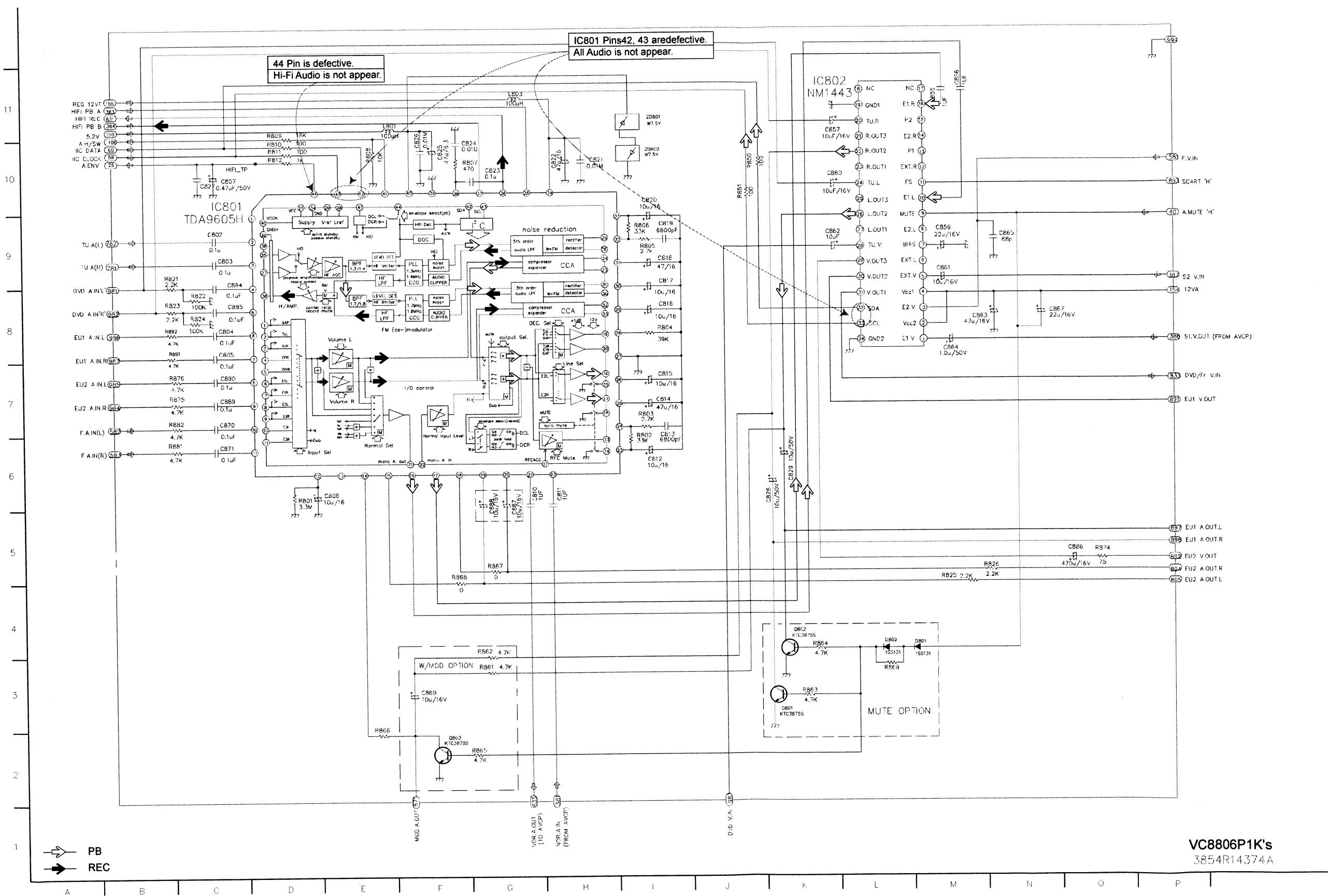
3-35

4. A/V CIRCUIT DIAGRAM

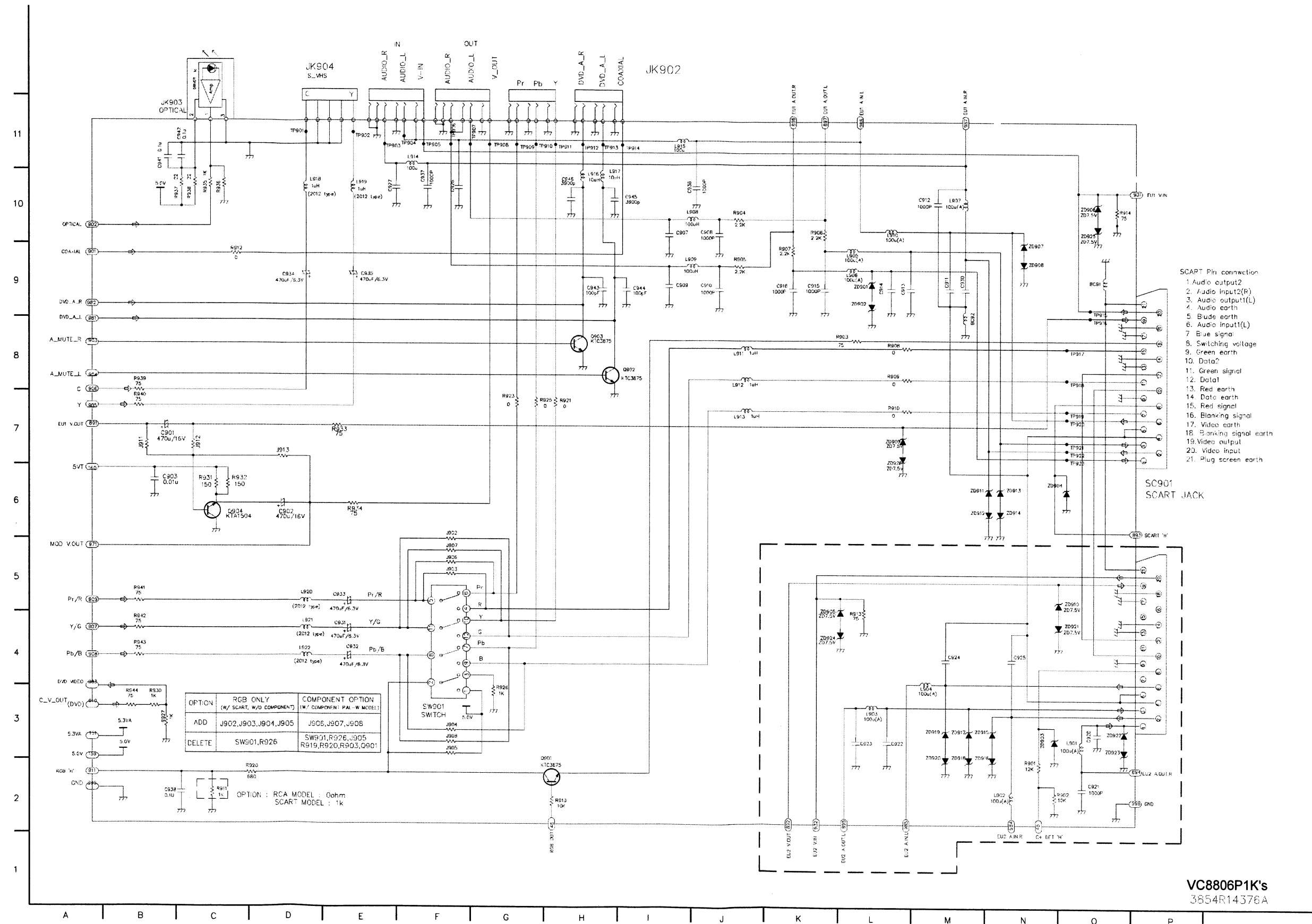


VC8806P1K's
3854R14373A

5. Hi-Fi CIRCUIT DIAGRAM



6. SCART(JACK) CIRCUIT DIAGRAM



Reset is defective. Set dead. IC504 is defective.

CLOCK SETTING will not operate. X501 is defective.

μ-COM will not operate. X502 is defective.

SW is defective. Key service dead.

RC501 is defective. R/C will not operate.

VCR will not operate. IC505 is defective.

Deck will not operate. R575, R576, R577, R578 are defective.

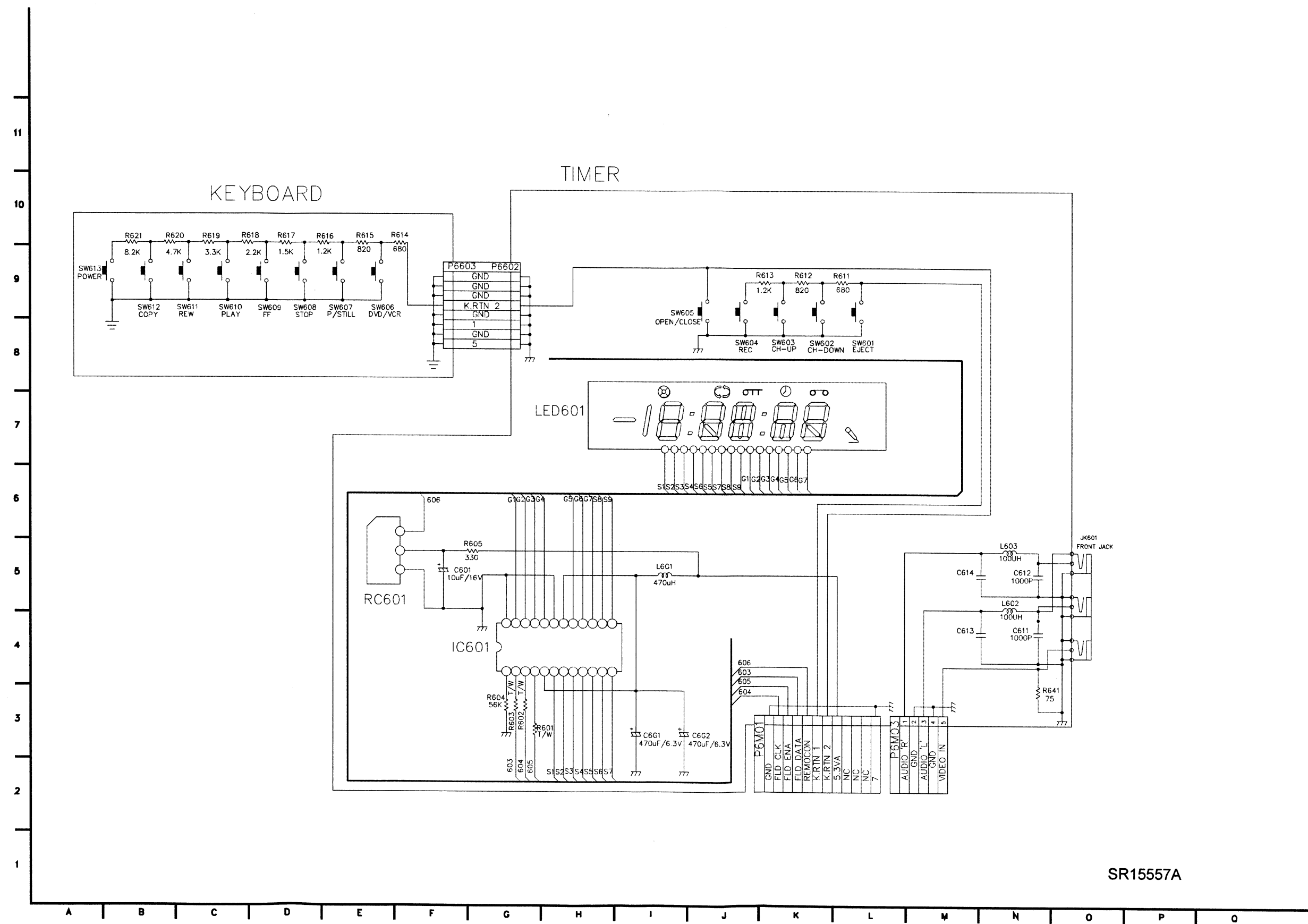
Auto stop occurs. RS501, RS502, Q514, Q515 are defective.

Auto Rew will not working. ES501, ES502, LD501 are defective.

μ-COM is unstable. Q501, Q503 are defective.

VC8806P1K's 3854R14372A

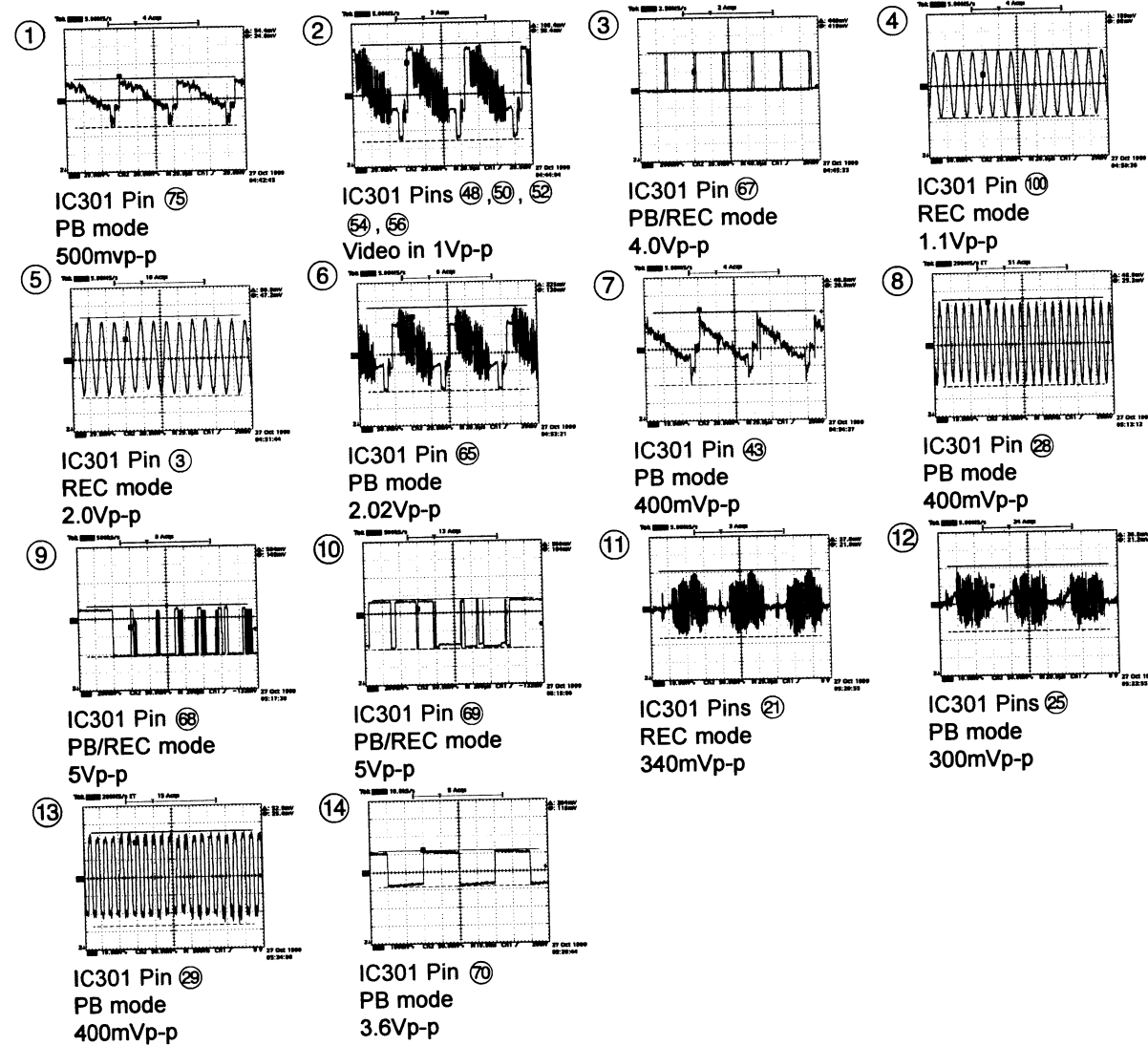
8. TIMER CIRCUIT DIAGRAM



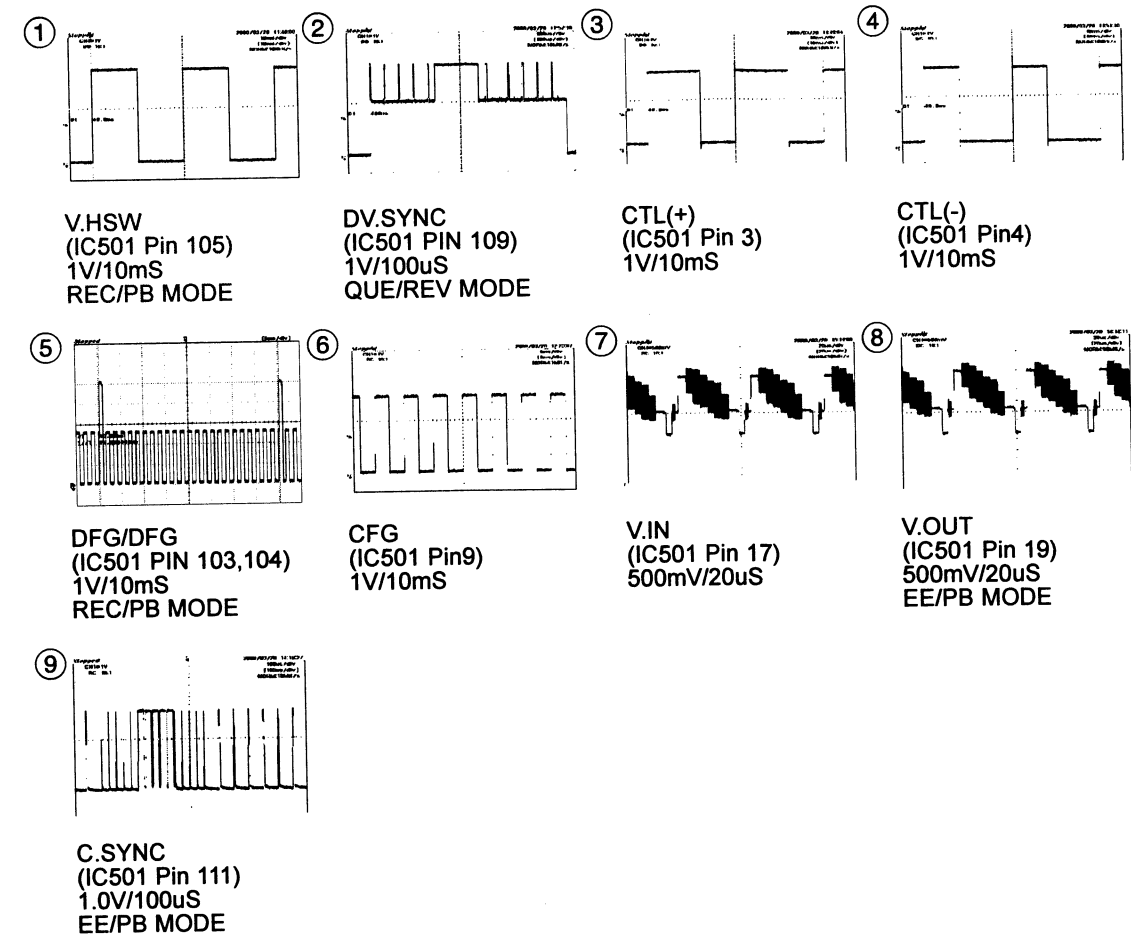
SR15557A

WAVEFORM & VOLTAGE SHEET

★ IC301 Oscilloscope Waveform



* IC501 Waveform Photographs



• CIRCUIT VOLTAGE CHART

MODE PIN NO.	EE	PB	REC
IC201			
1	2.36 V	2.35 V	2.32 V
2	2.4 V	2.35 V	2.4 V
3	3.5 V	3.49 V	3.5 V
4	2.43 V	2.41 V	2.38 V
5	0.002 V	0.005 V	0.006 V
6	0.4 V	3.7 V	0.39 V
7	0.003 V	0.003 V	0.003 V
8	0.003 V	0.003 V	0.003 V
9	2.87 V	2.85 V	2.81 V
10	2.36 V	2.35V	2.32 V
11	3.16 V	3.13 V	3 V
12	3 V	1.7 V	3.03 V
13	4 V	4 V	4 V
14	2.3 V	2.3 V	2.25 V
15	2.98 V	1.78 V	2.93 V
16	3.2 V	3.2 V	3.2 V
17	0.15 V	3.86 V	0.017 V
18	0.124 V	3.38 V	0.127 V
19	2.23 V	2.23 V	2.23 V
20	3 V	3.3 V	3.3 V
21	1.84 V	2.34 V	2.35 V
22	4.71 V	0.002 V	0.007 V
23	4.72 V	4.69 V	4.64 V
24	4.72 V	4.69 V	4.63 V
25	2.37 V	2.26 V	2.37 V
26	2.37 V	2.25 V	2.36 V
27	3 V	2.86 V	3 V
28	0.182 V	0.187 V	0.182 V
29	0.46 V	0.62 V	0.85 V
30	1.95 V	1.94 V	1.91 V
IC301			
1	4.8 V	4.84 V	0.99 V
2	0.11 V	0.014 V	0.81 V
3	2.16 V	2.16 V	2.03 V
4	0.69 V	0.63 V	1.73 V
5	2.15 V	2.15 V	2.26 V
6	2.16 V	2.15 V	2.06 V
7	2.15 V	2.15 V	2.1 V
8	2.15 V	2.15 V	2.1 V
9	2.14 V	2.14 V	2.73 V
10	2.16 V	2.16 V	2.66 V
11	2.23 V	2.27 V	2.8 V
12	1.56 V	0.002 V	2.0 V
13	2.14 V	2.14 V	0.095 V
14	0.022 V	0.022 V	2.05 V
15	2.14 V	2.14 V	2.08 V
16	4.85 V	0.146 V	4.68 V
17	2.14 V	2.14 V	2.09 V
18	4.8 V	4.86 V	4.73 V
19	3.88 V	3.92 V	2.72 V
20	2.31 V	0.003 V	0.006 V
21	3 V	1.68 V	3.02 V
22	3.2 V	2.62 V	3.2 V
23	3.2 V	2.55 V	3.2 V

MODE PIN NO.	EE	PB	REC
24	4.85 V	4.85 V	4.75 V
25	0.121 V	3.4 V	0.19 V
26	1.65 V	1.25 V	1.6 V
27	2.16 V	2.1 V	2.14 V
28	3.75 V	3.7 V	3.66 V
29	2.43 V	2.46 V	2.34 V
30	0.002 V	0.002 V	0.005 V
31	4.76 V	4.58 V	4.72 V
32	4.68 V	4.58 V	4.71 V
33	2.88 V	2.86 V	2.8 V
34	0.061 V	0.06 V	0.061 V
35	3.02 V	2.34 V	2.99 V
36	3.5 V	2.84 V	3.4 V
37	1.7 V	1.76V	1.61 V
38	2 V	2.05 V	1.94 V
39	8.65 V	8.6 V	8.38 V
40	0.002 V	0.003 V	0.006 V
41	0.002 V	0.003 V	0.006 V
42	4.8 V	4.8 V	4.68 V
43	2.4 V	2.67 V	2.17 V
44	13.8 mV	3.86 V	0.03 V
45	2.5 V	2.52 V	2.55 V
46	2.6 V	2.78 V	2.64 V
47	4.14 V	4.14 V	4.14 V
48	3.3 V	3.09 V	3.30 V
49	2.97 V	2.93 V	3.69 V
50	1.93 V	1.92 V	1.92 V
51	0.002 V	0.003 V	0.005 V
52	1.93 V	1.93 V	1.92 V
53	2.33 V	2.33 V	2.34 V
54	1.93 V	1.92 V	1.92 V
55	5.14 V	5.14 V	5.13 V
56	2.24 V	2.57 V	2.22 V
57	1.95 V	2.28 V	0.006 V
58	3 V	2.55 V	3.01 V
59	2.9 V	2.93 V	2.92 V
60	1.47 V	1.54 V	1.48 V
61	1.8 V	2.44 V	1.79 V
62	0.087 V	0.09 V	0.088 V
63	1.8 V	2.55 V	1.78 V
64	0.002 V	0.003 V	0.006 V
65	1.71 V	0.002 V	1.69 V
66	0.002 V	0.003 V	0.006 V
67	0.005 V	0.07 V	0.44 V
68	4.8 V	4.8 V	4.78 V
69	4.7 V	4.7 V	4.7 V
70	7.75 V	2.55 V	5.55 V
71	5.55 V	0.008 V	0.008 V
72	4.84 V	4.8 V	4.72 V
73	2.21 V	2.2 V	2.24 V
74	2.45 V	2.6 V	2.43 V
75	2.38 V	0.72 V	2.38 V
76	2.4 V	0.81 V	2.39 V
77	1.58 V	1.6 V	1.48 V
78	2.44 V	3.35 V	2.33 V

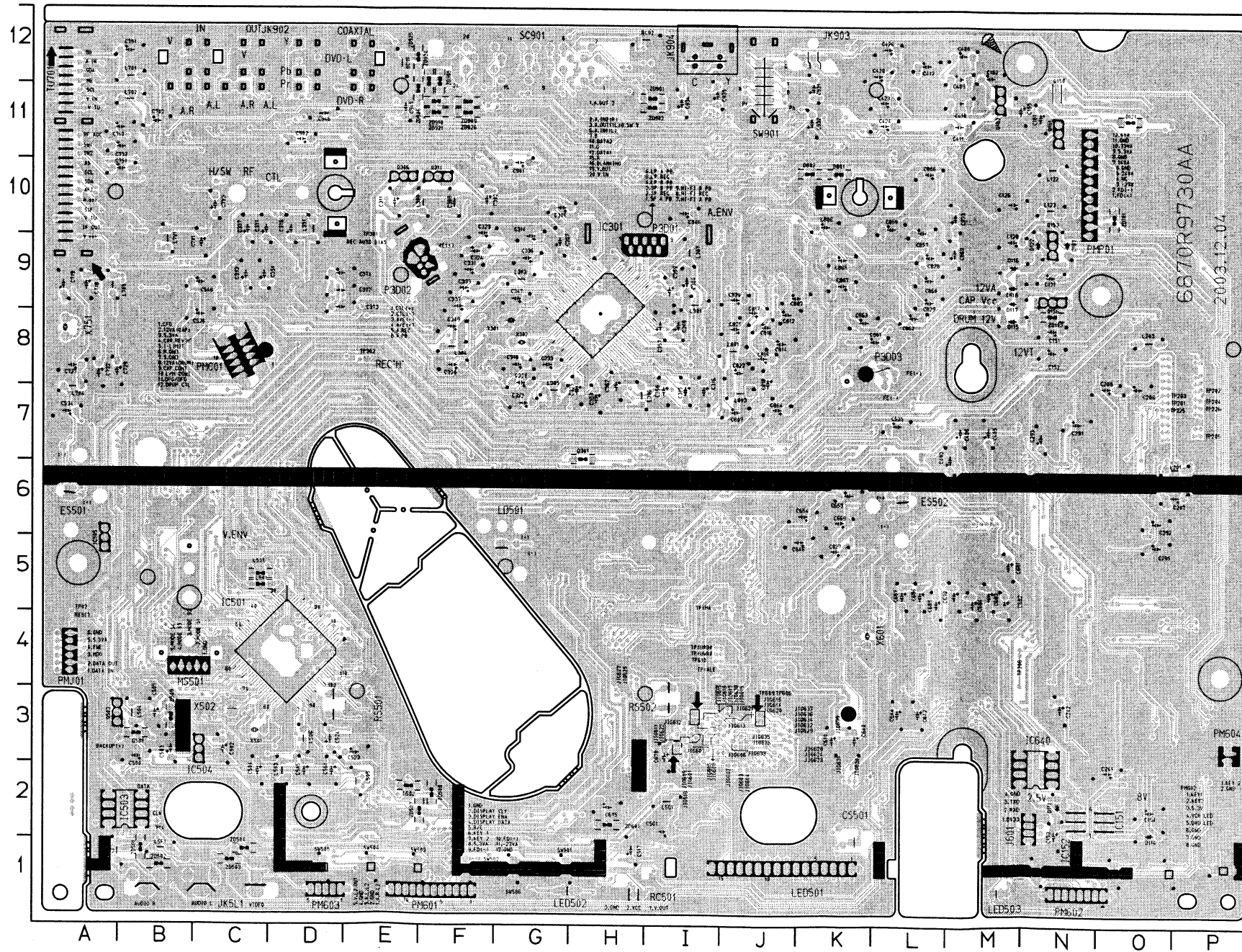
MODE PIN NO.	EE	PB	REC
79	1.73 V	1.67 V	2.51 V
80	0.98 V	0.98 V	4.46 V
81	1.1 V	1.13 V	1.15 V
82	0.003 V	0.004 V	0.006 V
83	1.65 V	1.03 V	1.41 V
84	0.258 V	2.5 V	0.014 V
85	0.002 V	0.003 V	1.38 V
86	0.251 V	0.014 V	1.98 V
87	0.77 V	0.78 V	0.78 V
88	0.77 V	0.78 V	0.77 V
89	0.77 V	0.78 V	0.77 V
90	0.77 V	0.78 V	0.77 V
91	4.85 V	4.83 V	4.74 V
92	2.1 mV	0.004 V	0.006 V
93	1.7 V	1.72 V	3.94 V
94	1.7 V	1.71 V	3.93 V
95	1.7 V	1.71 V	3.92 V
96	1.7 V	1.71 V	3.94 V
97	0.002 V	0.005 V	0.006 V
98	2.16 V	2.16 V	2.21 V
99	2.16V	2.16 V	2.25 V
100	2.16 V	2.16 V	2.31 V
IC5F1			
1	2.33 V	2.31 V	2.3 V
2	4.98 V	4.9 V	4.9 V
3	5 V	5 V	5 V
4	4.96 V	4.9 V	4.9 V
5	4.89 V	4.85 V	4.8 V
6	0.64 V	0.59 V	0.6 V
7	0.64 V	0.59 V	0.6 V
8	0.64 V	0.61 V	0.6 V
9	0.73 V	0.93 V	0.96 V
10	1 V	0.92 V	0.91 V
11	0.72 V	0.63 V	0.92 V
12	1.83 V	1.84 V	1.8 V
13	0.73 V	0.75 V	0.72 V
14	1.26 V	1.22 V	1.2 V
15	1.26 V	1.23 V	1.1 V
16	1.65 V	1.63 V	1.54 V
17	1.58 V	1.58 V	1.42 V
18	4.89 V	4.8 V	4.8 V
19	0.002 V	0.003 V	0.003 V
20	1.75 V	1.63 V	1.5 V
21	1.7 V	1.7 V	1.5 V
22	1.78 V	1.71 V	1.5 V
23	1.73 V	1.6 V	1.41 V
24	0.002 V	0.003 V	0.003 V
IC751			
1	5.1 V	5.1 V	5.08 V
2	1.5 V	1.5 V	1.51 V
3	1.5 V	1.5 V	1.5 V
4	0.002 V	0.003 V	0.003 V
5	2.5 V	2.46 V	2.46 V
6	2.44 V	2.44 V	2.43 V
7	1.84 V	1.89 V	2.06 V

MODE PIN NO.	EE	PB	REC
8	1.86 V	0.004 V	0.004 V
9	1.86 V	0.004 V	0.004 V
10	0.002 V	0.003 V	0.003 V
11	5.12 V	5.12 V	5.11 V
12	4.8 V	4.8 V	4.8 V
13	4.7 V	4.75 V	4.7 V
14	1.75V	2.6 V	2.59 V
15	1.77 V	2.6 V	2.6 V
16	1.77 V	5 V	5 V
17	1.75 V	1.5 V	2.06 V
18	1.75 V	1.5 V	2 V
19	5 V	5 V	5 V
20	0.003 V	0.003 V	0.003 V
21	1.88 V	1.58 V	2 V
22	5.1 V	5.1 V	5.11 V
23	0.002 V	0.005 V	0.004 V
24	0.002 V	0.005 V	0.005 V
25	0.002 V	0.003 V	0.003 V
26	0.05 V	0.051 V	0.051 V
27	0.05 V	0.05 V	0.05 V
28	0.002 V	0.003 V	0.005 V
29	0.002 V	0.003 V	0.003 V
30	2.78 V	2.77 V	2.76 V
31	2.78 V	1.9 V	2.76 V
32	0.002 V	0.003 V	0.005 V
33	5.1 V	5.09 V	5.08 V
34	4.06 V	4.08 V	4.06 V
35	0.003 V	0.003 V	0.003 V
36	2.77 V	2.76 V	2.76 V
37	0.002 V	0.002 V	0.002 V
38	0.002 V	0.003 V	0.002 V
39	0.002 V	0.003 V	0.002 V
40	2.76 V	2.75 V	2.75 V
41	2.76 V	2.75 V	2.75 V
42	2.59 V	2.59 V	2.6 V
43	2.35 V	2.35 V	2.35 V
44	0.003 V	0.003 V	0.003 V
IC501			
1	0.002 V	0.002 V	0.002 V
2	2.56 V	2.55 V	2.55 V
3	2.56 V	2.55 V	2.9 V
4	2.56 V	2.55 V	2 V
5	2.56 V	2.55 V	2.55 V
6	2.56 V	2.56 V	2.55 V
7	2.64 V	2.63 V	2.6 V
8	2.54 V	2.53 V	2.52 V
9	0.064 V	2.27 V	2.26 V
10	5.13 V	5.12 V	5.11 V
11	1.69 V	1.68 V	1.66 V
12	1.7 V	1.7 V	1.67 V
13	2.32 V	2 V	2.3 V
14	0.48 V	0.08 V	0.53 V
15	1.28 V	1.29 V	1.36 V
16	1.84 V	1.83 V	1.8 V
17	2.32 V	3 V	2.26 V

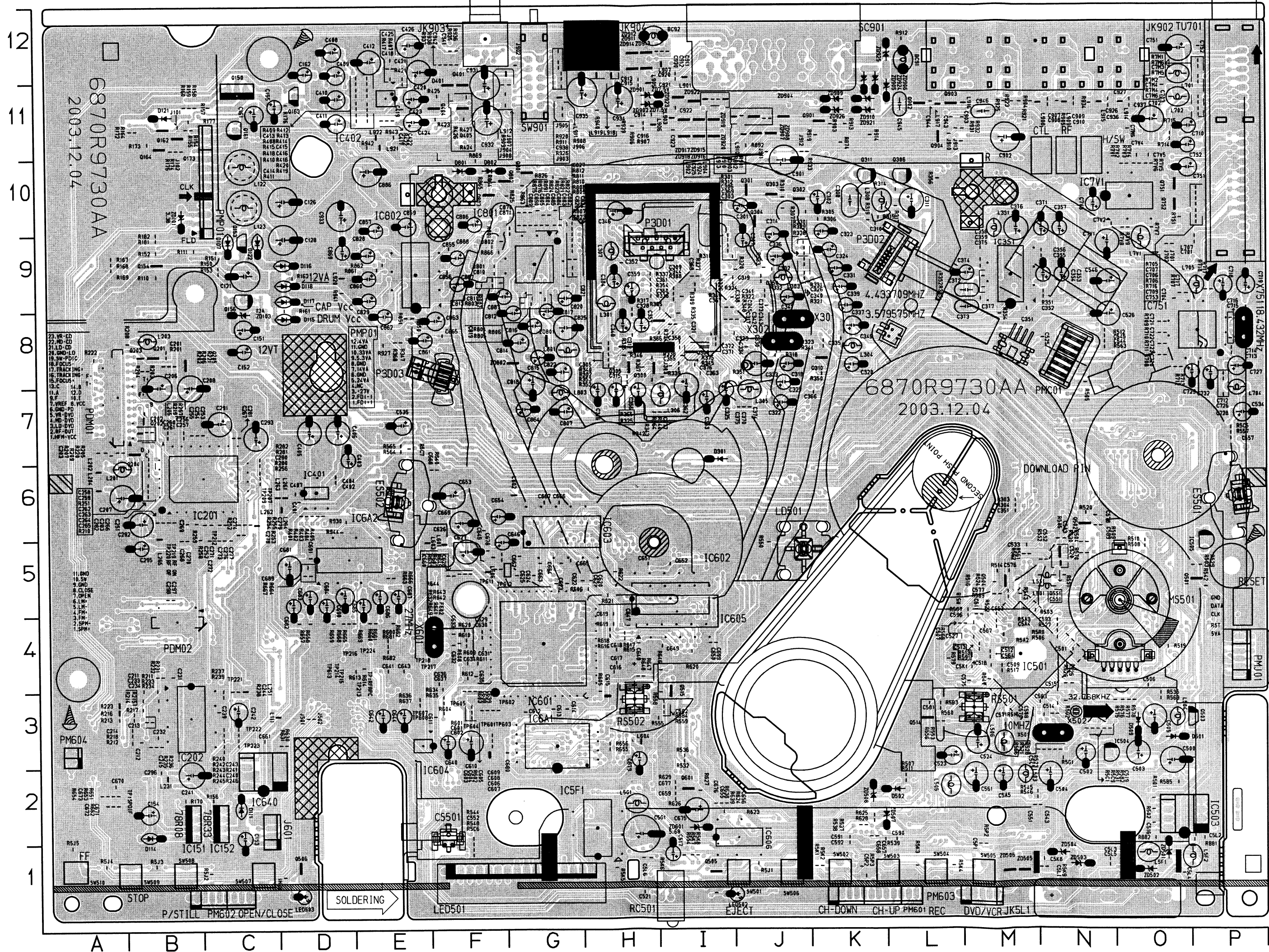
MODE PIN NO.	EE	PB	REC
18	4.7 V	4.7 V	4.6 V
19	2.19 V	3 V	2.13 V
20	0.01 V	0.009 V	0.01 V
21	2.2 V	2.2 V	2.16 V
22	2.32 V	2.3 V	2.26 V
23	0.01 V	0.009 V	0.01 V
24	0.3 V	2.84 V	0.012 V
25	0.08 V	3.4 V	0.068 V
26	5.14 V	5.13 V	5.12 V
27	4.2 V	4.16 v	3.93 V
28	5.13 V	5.13 V	5.11 V
29	5.13 V	5.13 V	5.11 V
30	0.004 V	0.002 V	0.003 V
31	0.002 V	0.002 V	0.002 V
32	0.002 V	0.002 V	0.002 V
33	0.18 V	0.18 V	0.18 V
34	1.37 V	1.3 V	1.42 V
35	5.14 V	5.13 V	5.1 V
36	5.14 V	5.13 V	5.1 V
37	4.74 V	4.73 V	4.7 V
38	4.74 V	4.75 V	4.7 V
39	2.45 V	4.9 V	2.33V
40	5 V	0.003 V	4.96 V
41	2.28 V	1.55 V	1.42 V
42	0.003 V	0.003 V	0.004 V
43	4.76 V	4.75 V	4.73 V
44	0.003 V	0.003 V	0.004 V
45	(-)0.001 V	(-)0.001 V	(-)0.001 V
46	0.003 V	0.003 V	0.004 V
47	0.003 V	0.003 V	5 V
48	0.003 V	0.003 V	0.004 V
49	5.14 V	0-5 V	0.005-5 V
50	5.1 V	0.003 V	0.004 V
51	4.38 V	0.03 V	0.035 V
52	0.031 V	5.06 V	0.038 V
53	0.003 V	0.003 V	0.004 V
54	5.1 V	5 V	5 V
55	5.1 V	5.13 V	5.11 V
56	5.1 V	5.1 V	5.1 V
57	0.002 V	0.002 V	0.002 V
58	0.003 V	0.004 V	0.004 V
59	4.8 V	4.8 V	4.8 V
60	4.7 V	4.7 V	4.9 V
61	4.7 V	5 V	5 V
62	5 V	5 V	5 V
63	1.8 V	1.3 V	1.68 V
64	5.1 V	5 V	5 V
65	1.78 V	5.1 V	1.66 V
66	5.1 V	5.1 V	5.08 V
67	0.004 V	4.4 V	5.08 V
68	0.001 V	5.1 V	0.005 V
69	0.001 V	5.1 V	5.12 V
70	5.14 V	5.1 V	5.12 V
71	5.14 V	0.001 V	0.001 V
72	0.028 V	0.028 V	0.029 V

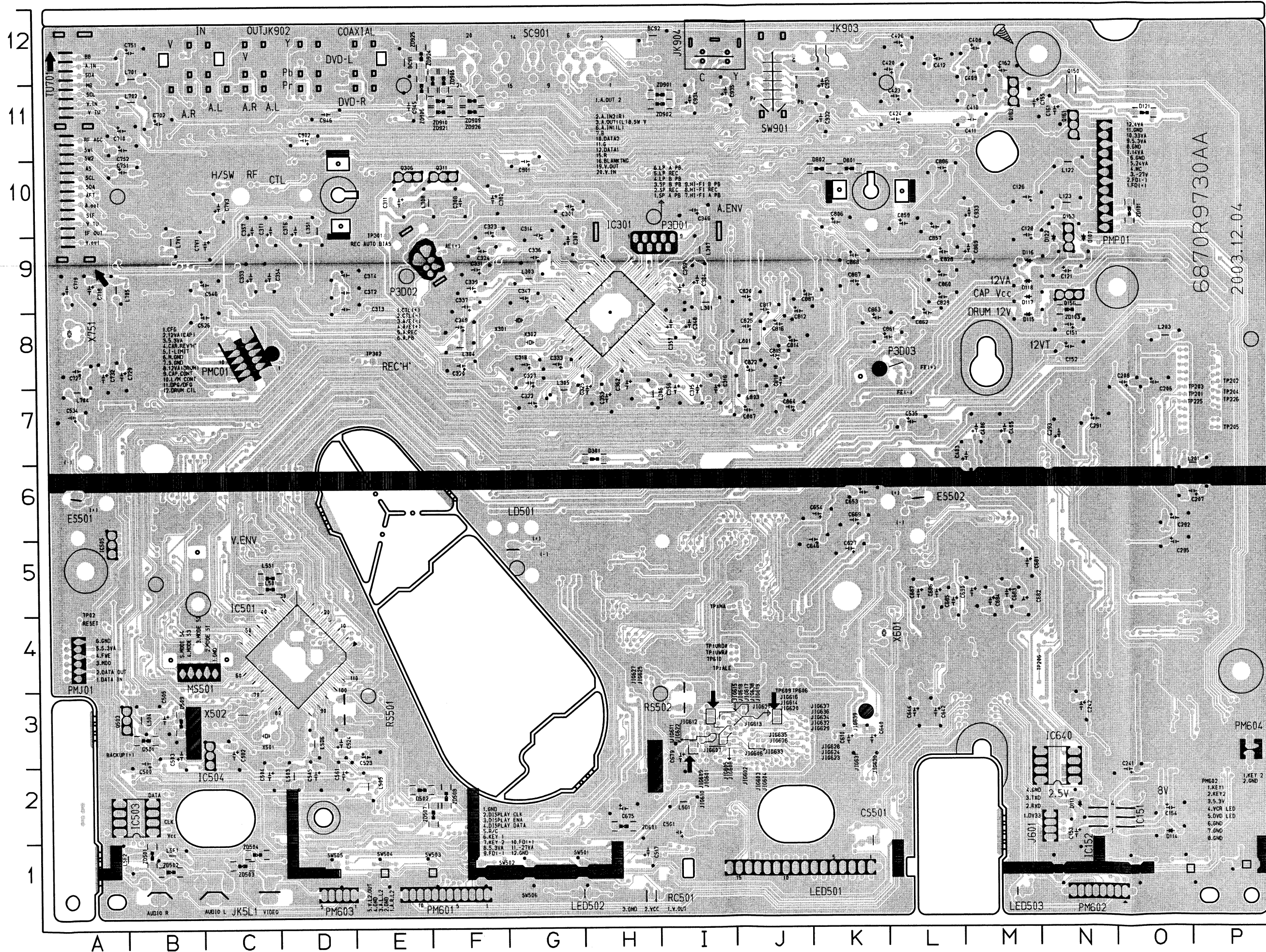
MODE PIN NO.	EE	PB	REC
73	5 V	5.1 V	5.04 V
74	0.001 V	0.001 V	0.002 V
75	1.5 V	1.93 V	1.48 V
76	1.7 V	2.02 V	1.44 V
77	5.1 V	5.1 V	5.08 V
78	2.5 V	2.51 V	2.52 V
79	0.001 V	0.002 V	0.002 V
80	2.53 V	2.5 V	2.5 V
81	3.2 V	3.2 V	3.19 V
82	5.12 V	5.1 V	5.1 V
83	0.172 V	2.68 V	2.55 V
84	0.004 V	2.4 V	2.69 V
85	0.019 V	3.4 V	3.44 V
86	2.55 V	2.55 V	2.56 V
87	5.11 V	3.1 V	2.29 V
88	5.11 V	4.95 V	4.9 V
89	5.11 V	4.97 V	4.9 V
90	5.11 V	5 V	4.98 V
91	5.11 V	5.1 V	5.09 V
92	5.12 V	0.008-0.05 V	0.006 V
93	0.005 V	0.005 V	0.006 V
94	0.005 V	0.005 V	0.013 V
95	4.38 V	0.05 V	0.012 V
96	0.005 V	0.005 V	0.006 V
97	5.11 V	5.1 V	5.09 V
98	0.005 V	5.3 V	0.006 V
99	5.11 V	2.55 V	2.52 V
100	0.005 V	0.005 V	0.006 V
101	1.51 V	2.6 V	1.31 V
102	0.005 V	0.006 V	0.006 V
103	0.099 V	1.36 V	1.38 V
104	0.099 V	1.36 V	1.36 V
105	5.11 V	2.55 V	2.53 V
106	0.005 V	2.54 V	2.53 V
107	0.005 V	2.75 V	2.75 V
108	0.005 V	2.81 V	2.79 V
109	0.049 V	50.6 V	0.05 V
110	0.002 V	0.002 V	0.002 V
111	0.48 V	0.6 V	0.55 V
112	5.12 V	5.11 V	5.1 V
IC801			
1	3.8 V	3.81 V	3.82 V
2	3.8 V	3.82 V	3.82 V
3	3.8 V	3.82 V	3.82 V
4	3.8 V	3.82 V	3.82 V
5	3.8 V	3.82 V	3.82 V
6	3.8 V	3.82 V	3.82 V
7	3.8 V	3.82 V	3.82 V
8	3.8 V	3.82 V	3.82 V
9	3.8 V	3.82 V	3.82 V
10	3.8 V	3.82 V	3.82 V
11	3.8 V	3.82 V	3.82 V
12	0.054 V	~	0.048 V
13	3.87 V	3.8 V	3.99 V
14	0.008 V	0.008 V	0.011 V

1. MAIN P.C.BOARD (VCR+DVD)_SOLDER SIDE



LOCATION GUIDE			
H/5001	CP10	PIN0244 N6	PIN0432 J5
IC301	H8	PIN0250 N6	PIN0433 J5
IC501	D4	PIN0251 N7	PIN0459 K4
IG601	J3	PIN0299 G9	PIN0473 H4
IG602	J2	PIN0302 G9	PIN0474 H4
IG603	J2	PIN0303 G9	PIN0475 H4
IG604	J3	PIN0306 H8	PIN0476 H4
IG605	J3	PIN0306 H8	PIN0477 H4
IG606	J3	PIN0307 H8	PIN0494 C2
IG607	J3	PIN0309 H8	PIN0600 N6
IG608	J3	PIN0310 H8	PIN0601 N4
IG609	J3	PIN0311 H8	PIN0602 M6
IG610	J3	PIN0312 H8	PIN0603 L5
IG611	J3	PIN0315 J9	REC-1TP
IG612	J3	PIN0316 J9	RF-T1P C10
IG613	H8	PIN0317 H8	A4
IG614	J3	PIN0327 P9	T109
IG615	J3	PIN0328 D5	T110
IG616	J3	PIN0332 C5	T111
IG617	J3	PIN0333 C6	T112
IG618	J3	PIN0335 C5	T201
IG619	J3	PIN0336 C5	T202
IG620	J3	PIN0340 C4	T203
IG621	J3	PIN0342 C5	T204
IG622	J3	PIN0343 C5	T205
IG623	J3	PIN0345 C5	T206
IG624	J3	PIN0350 B4	T225
IG625	H4	PIN0351 C4	T226
IG626	J3	PIN0352 B4	PE537
IG627	H4	PIN0353 B4	P606
IG628	J3	PIN0354 B4	P609
IG629	J3	PIN0360 D3	PE10
IG630	K2	PIN0363 D3	PE101
IG631	K2	PIN0364 C2	PE102
IG632	J3	PIN0365 C2	PE103
IG633	J3	PIN0367 C2	PE904
IG635	J3	PIN0368 E2	PE905
IG636	J3	PIN0369 E4	PE906
IG637	J3	PIN0370 E4	PE907
IG638	J3	PIN0372 D6	PE908
IG639	K3	PIN0411 J5	PE909
IN0010 C5		PIN0414 J5	PE910
IN0011 C5		PIN0415 J5	PE911
IN0012 H9		PIN0416 H9	PE912
IN0014 C9		PIN0417 H5	PE913
IN0015 H8		PIN0418 H4	PE914
IN0016 H9		PIN0419 H4	PE915
IN0017 H9		PIN0420 J5	PE916
IN0018 H9		PIN0421 J6	PE917
IN0019 H7		PIN0422 H4	PE918
IN0020 H8		PIN0423 H4	PE919
IN0026 C3		PIN0424 H5	PE920
IN0027 H9		PIN0425 J4	PE921
IN0010 D5		PIN0426 J2	PE922
IN0017 F2		PIN0427 J5	PE923
IN0021 H2		PIN0428 J5	PE+ALE
IN0022 G2		PIN0429 J5	PE+MA
IN0024 F2		PIN0430 J5	PE+URDF
IN0024 N6		PIN0431 J5	PE+URDF

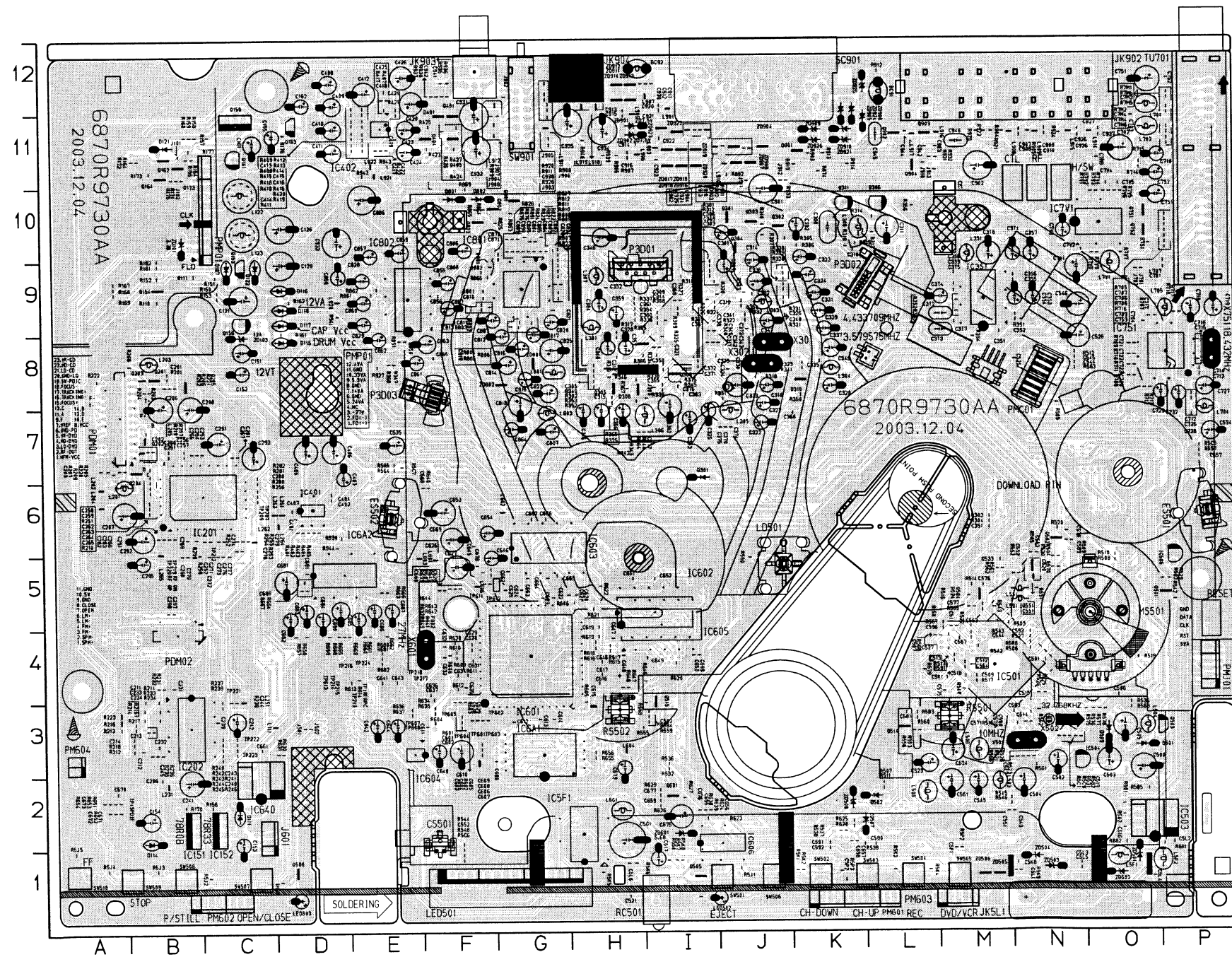




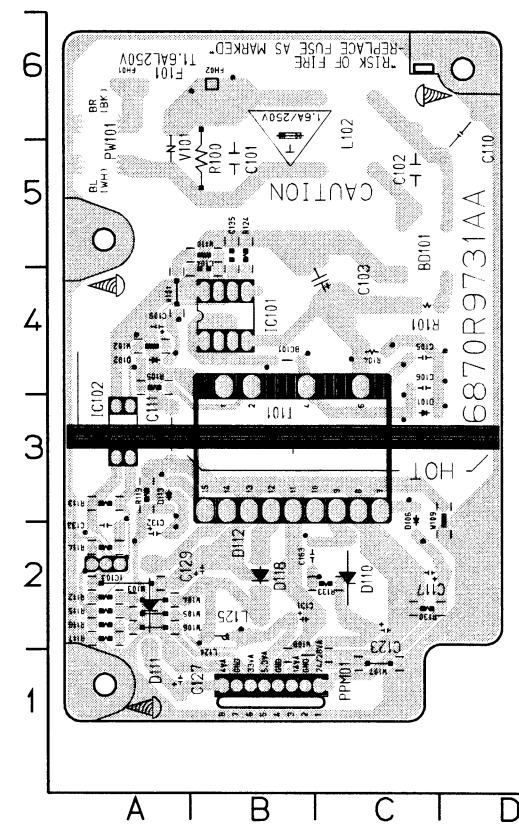
LOCATION GUIDE

H/SW: TP C10	PIN0244 N6	PIN0432 J5
IC301 H8	PIN0250 N6	PIN0433 J5
IC501 D4	PIN0251 N7	PIN0459 K4
JIG601 I3	PIN0299 G9	PIN0473 H4
JIG602 J2	PIN0302 G9	PIN0474 H4
JIG603 J2	PIN0303 G9	PIN0475 H4
JIG604 J2	PIN0304 G8	PIN0476 H4
JIG605 I3	PIN0306 I8	PIN0477 H4
JIG606 J3	PIN0307 I8	PIN0494 G2
JIG607 I3	PIN0309 I8	PIN0600 N6
JIG608 I3	PIN0310 I8	PIN0601 N4
JIG609 I3	PIN0311 I8	PIN0602 M6
JIG610 I3	PIN0312 I8	PIN0603 L5
JIG611 I3	PIN0315 I9	REC±TP C6
JIG612 I3	PIN0316 I9	RF±TP C10
JIG613 J3	PIN0319 H9	TP02 A4
JIG614 I3	PIN0327 D5	TP109 O2
JIG615 I3	PIN0328 D5	TP110 I4
JIG616 I3	PIN0332 C5	TP111 I4
JIG617 I3	PIN0333 C6	TP112 N2
JIG618 I3	PIN0335 C5	TP201 O7
JIG619 J3	PIN0336 C5	TP202 P8
JIG620 I3	PIN0340 C4	TP203 O7
JIG621 J3	PIN0342 C5	TP204 P7
JIG622 I3	PIN0343 C5	TP205 P7
JIG623 J2	PIN0346 B5	TP206 M4
JIG624 J3	PIN0350 B4	TP225 O7
JIG625 H4	PIN0351 C4	TP226 P7
JIG626 J3	PIN0352 B4	TP537 D10
JIG627 H4	PIN0353 B4	TP606 J4
JIG628 J3	PIN0354 B4	TP609 J4
JIG629 J3	PIN0360 D3	TP610 I4
JIG630 K2	PIN0363 D3	TP701 A10
JIG631 K2	PIN0364 E2	TP901 I12
JIG632 J3	PIN0365 E2	TP902 I12
JIG633 J3	PIN0366 E2	TP903 B11
JIG634 J3	PIN0367 E2	TP904 C11
JIG635 J3	PIN0368 E2	TP905 B12
JIG636 J3	PIN0369 E4	TP906 C11
JIG637 J3	PIN0370 E4	TP907 C11
JIG638 I3	PIN0372 D6	TP908 C12
JIG639 K3	PIN0411 I5	TP909 D11
PIN0010 C5	PIN0414 I5	TP910 D12
PIN0012 D4	PIN0415 I5	TP911 D12
PIN0042 H9	PIN0416 I6	TP912 D11
PIN0043 H9	PIN0417 H5	TP913 D12
PIN0054 G8	PIN0418 H4	TP914 E12
PIN0062 G9	PIN0419 H4	TP915 E11
PIN0064 H8	PIN0420 I5	TP916 F12
PIN0066 I9	PIN0421 I6	TP917 G11
PIN0071 H7	PIN0422 H4	TP918 G11
PIN0072 H8	PIN0423 H4	TP919 G11
PIN0086 C3	PIN0424 H5	TP920 H12
PIN0098 D4	PIN0425 J4	TP921 I12
PIN0105 D3	PIN0426 J5	TP922 I12
PIN0107 F2	PIN0427 J5	TP923 H12
PIN0121 H2	PIN0428 J5	TP±ALE I4
PIN0122 G2	PIN0429 J5	TP±MA I5
PIN0124 F2	PIN0430 J5	TP±URD± I4
PIN0243 N6	PIN0431 J5	TP±UWR± I4

2. MAIN P.C.BOARD (VCR+DVD)_COMPONENT SIDE

[illegible]

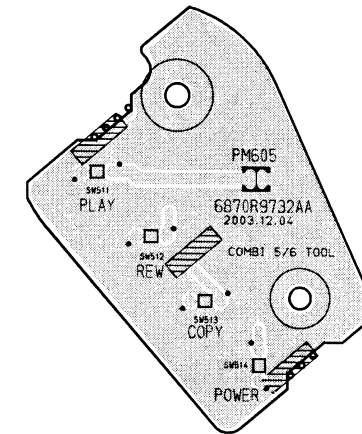
2. SMPS P.C.BOARD



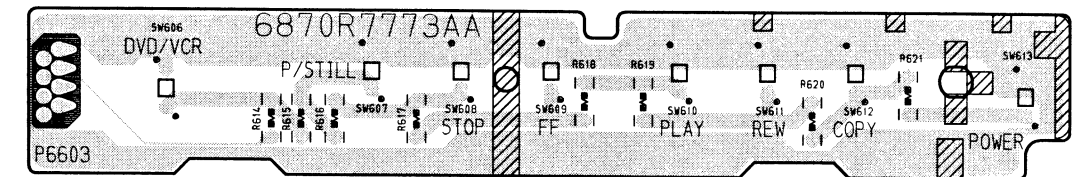
BC101	B4	D118	B2
BD101	C5	F101	A6
C101	B5	F102	B6
C102	C5	I101	B4
C103	C4	I102	A3
C104	B4	I103	A2
C105	C4	L102	C6
C106	C4	L124	B2
C107	A4	L125	B2
C110	B6	P101	C1
C117	B5	P103	A5
C123	C2	R105	B3
C127	A1	R104	C4
C129	B2	R105	A4
C131	B2	R112	A2
C132	A2	R113	A3
C133	A2	R114	A2
C135	B5	R115	A2
C163	B2	R116	A2
D101	C3	R117	A2
D102	A4	R119	A3
D106	C3	R124	B5
D110	C2	R130	C2
D111	A2	R133	C2
D112	B2	T101	B3
D113	A3	Y101	A5

3. KEY P.C.BOARD

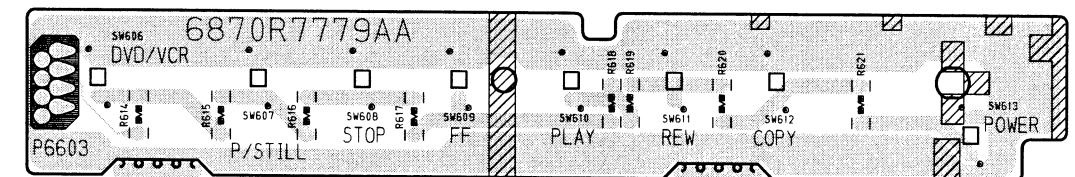
(5TOOL)



(7TOOL)



(8TOOL)

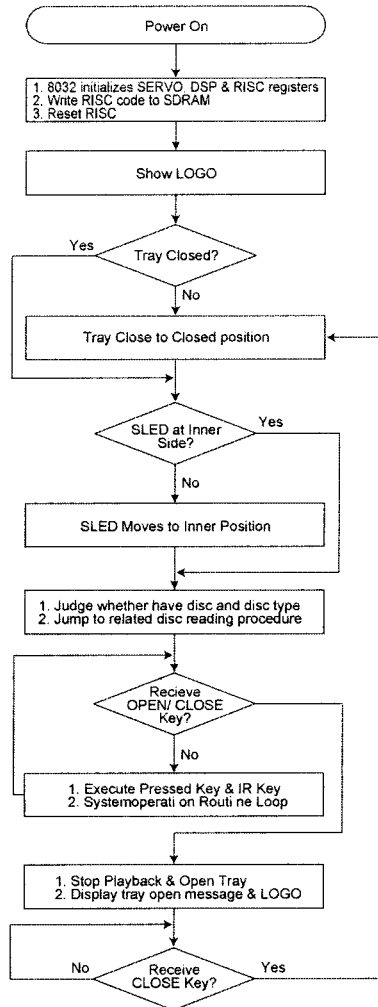


(7TOOL)

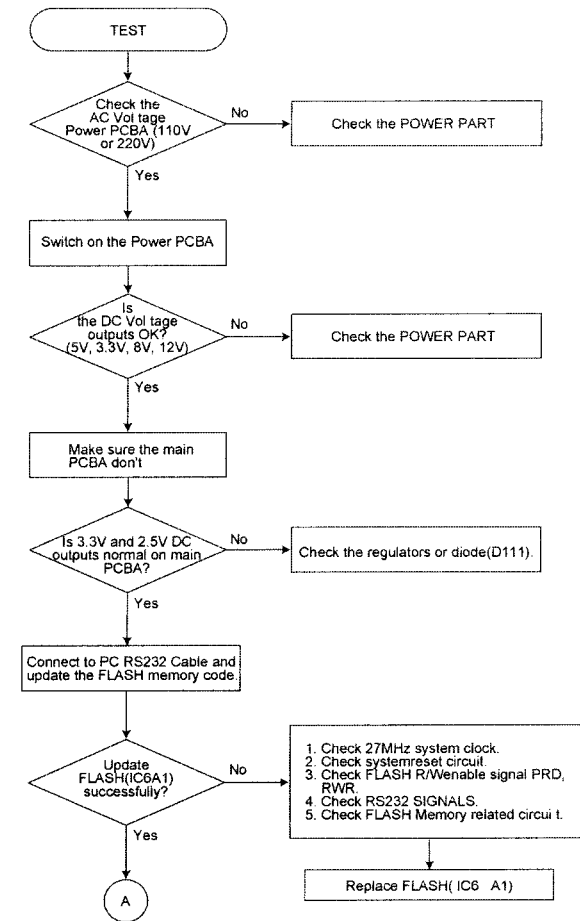


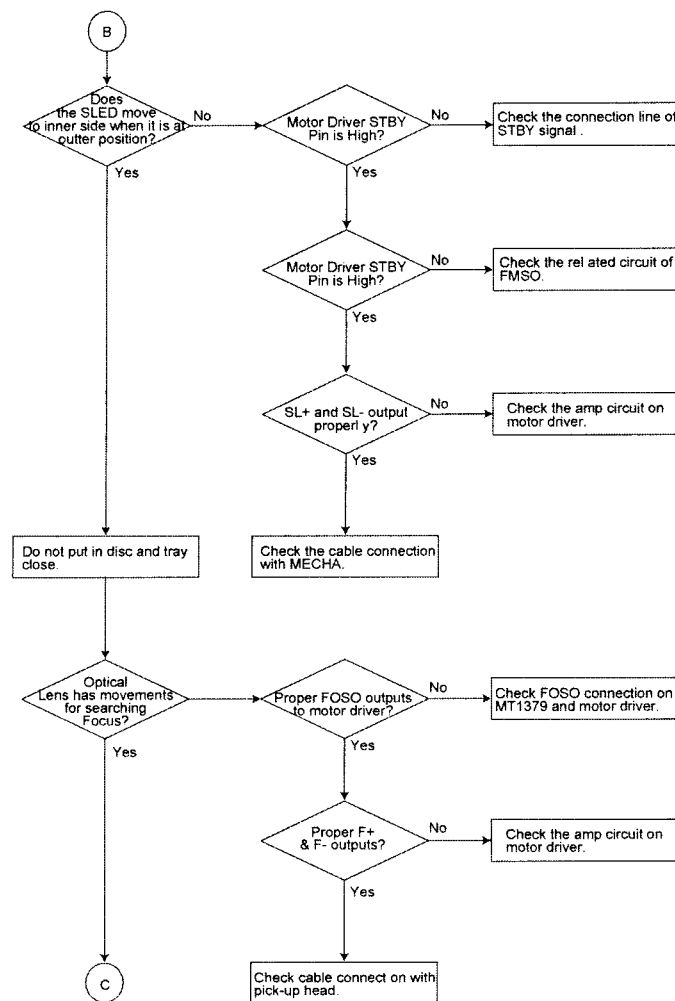
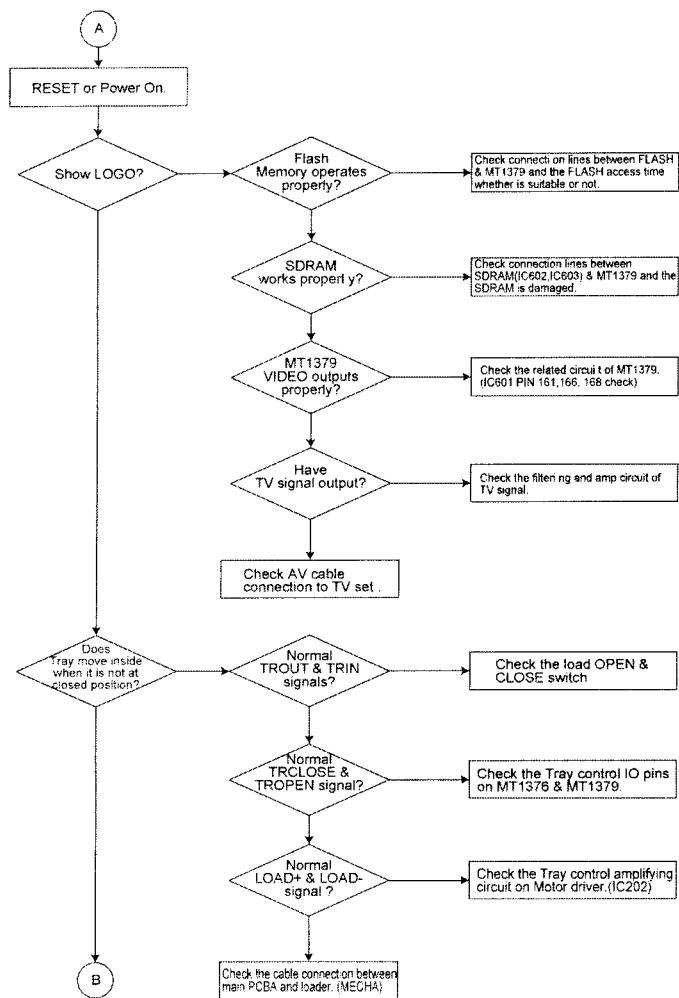
DVD PART ELECTRICAL TROUBLESHOOTING GUIDE

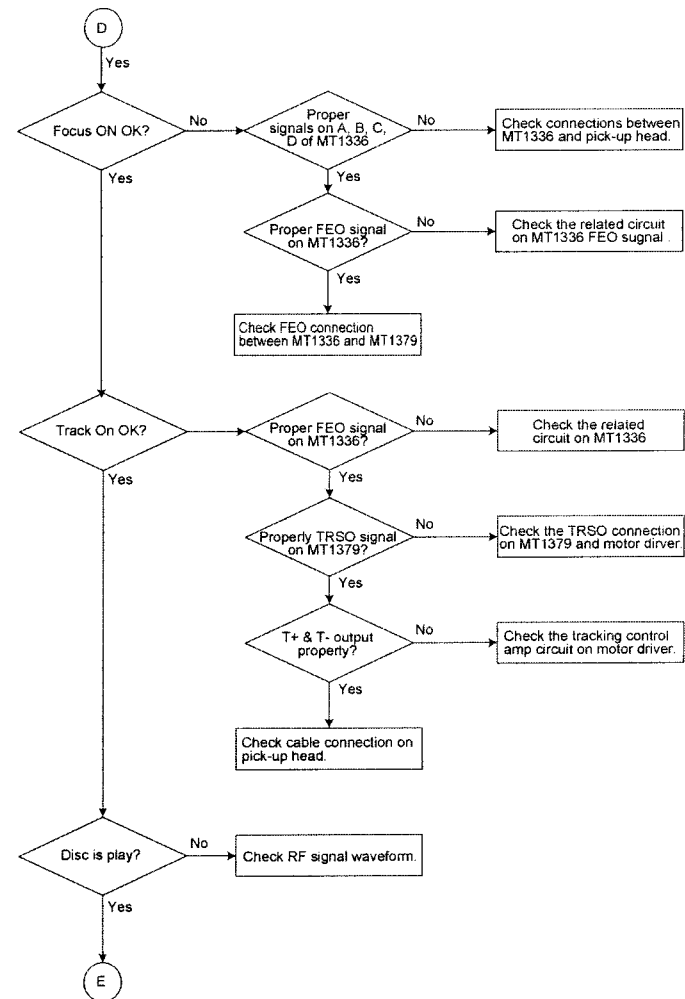
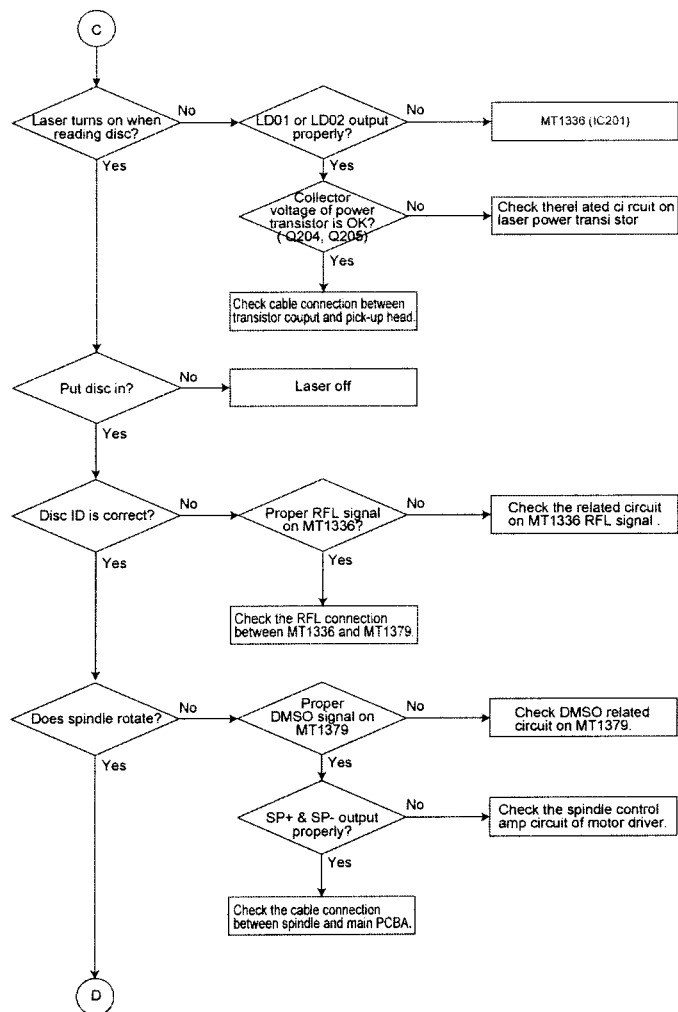
1. System operation flow

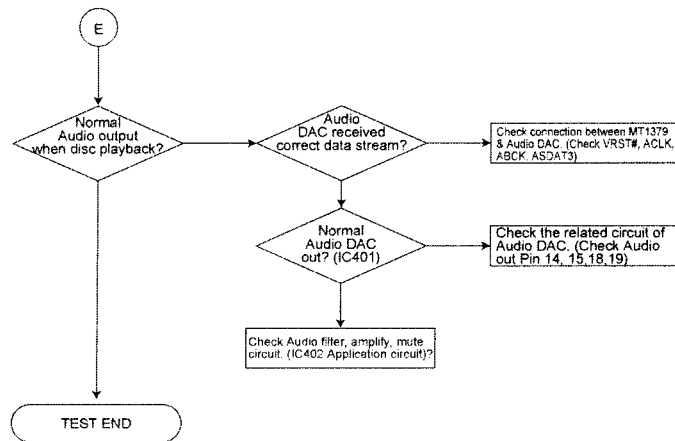


2. Test & debug flow









DETAILS AND WAVEFORMS ON SYSTEM TEST AND DEBUGGING

1. SYSTEM 27MHz CLOCK,RESET,FLASH R/W SIGNAL

1) MT1379 main clock is at 27MHz(X501)

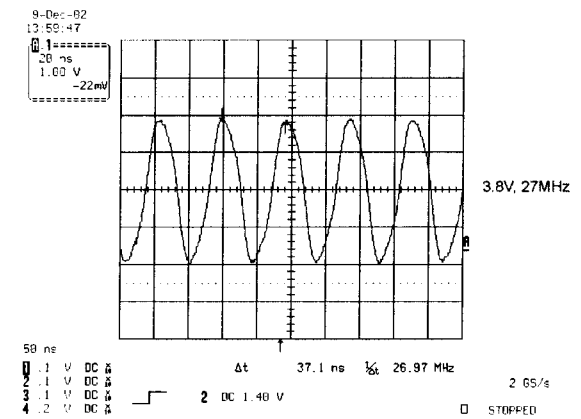


FIG 1-1

2) MT1379 & MT1336 reset is high active.

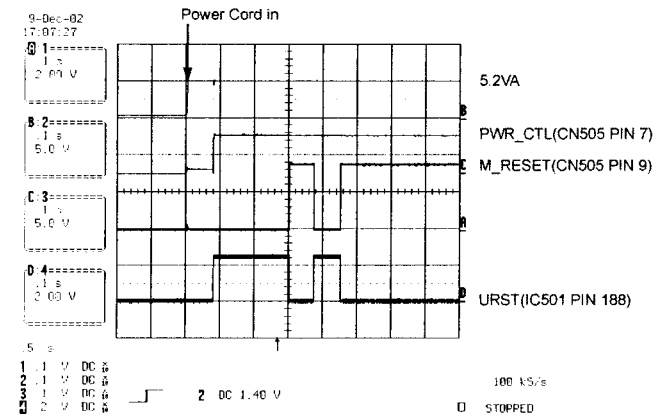


FIG 1-2

3) RS232 waveform during procedure(Downloading)

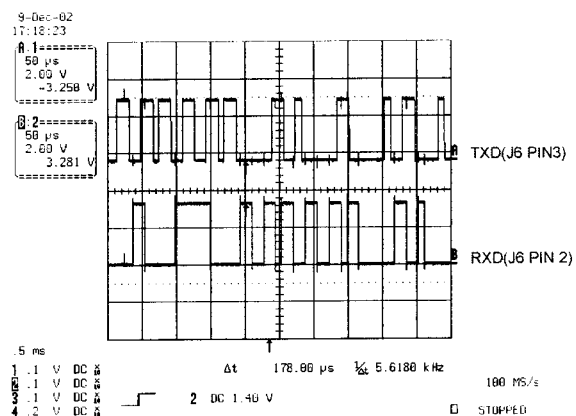


FIG 1-3

4) Flash R/W enable signal during download(Downloading)

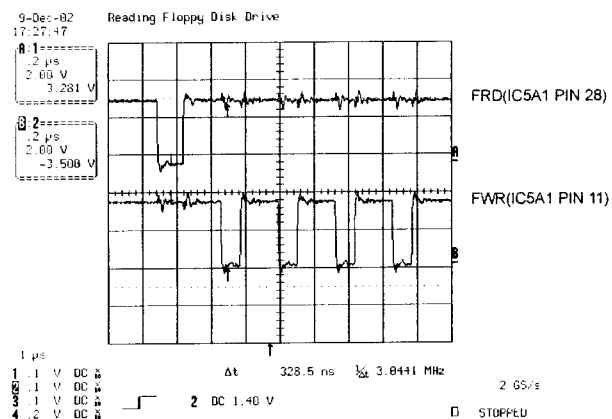


FIG 1-4

2. SDRAM CLOCK

1) MT1379 main clock is at 27MHz(X501)

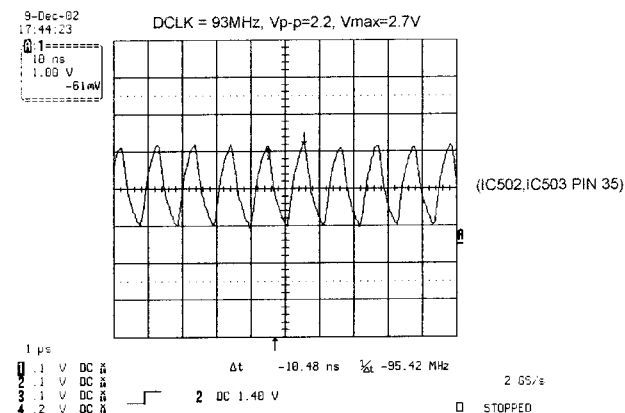


FIG 2-1

3. TRAY OPEN/CLOSE SIGNAL

1) Tray open/close waveform

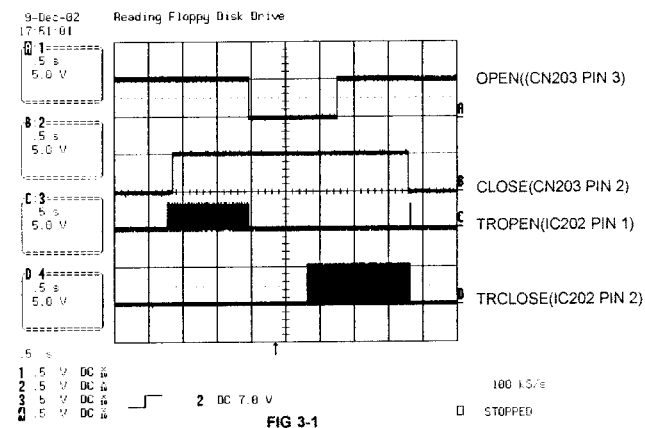


FIG 3-1

2) Tray close waveform

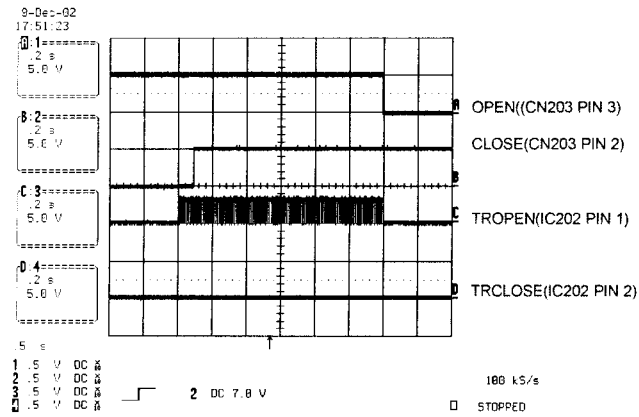


FIG 3-2

3) Tray open waveform

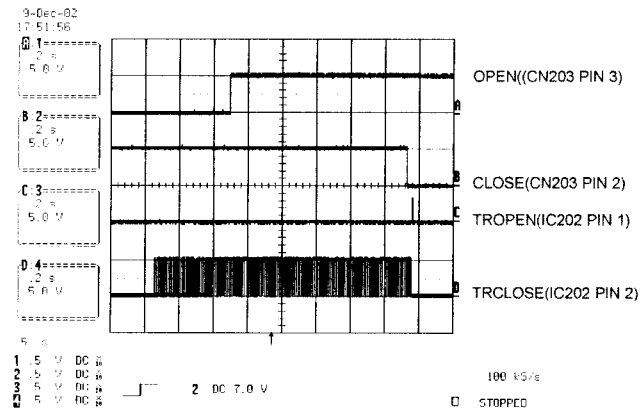


FIG 3-3

4. SLED CONTROL RELATED SIGNAL (NO DISC CONDITION)

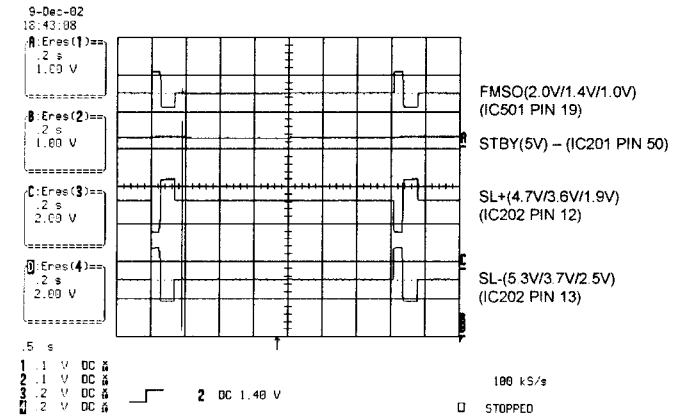


FIG 4-1

5. LENS CONTROL RELATED SIGNAL(NO DISC CONDITION)

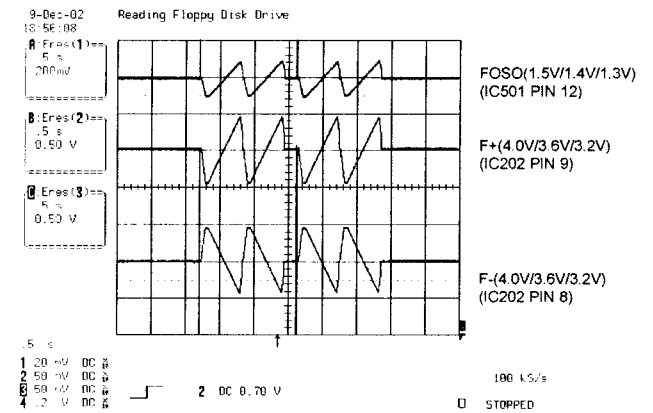


FIG 5-1

6. LASER POWER CONTROL RELATED SIGNAL(NO DISC CONDITION)

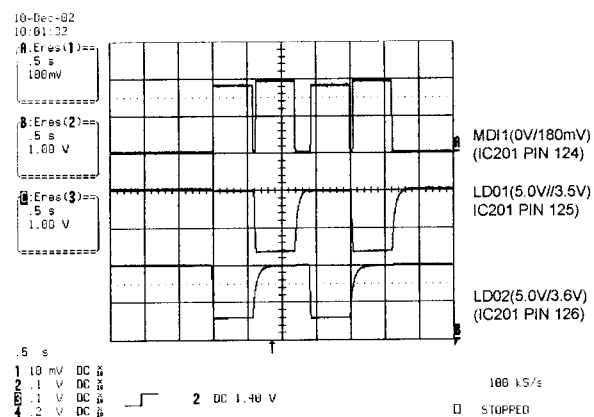


FIG 6-1

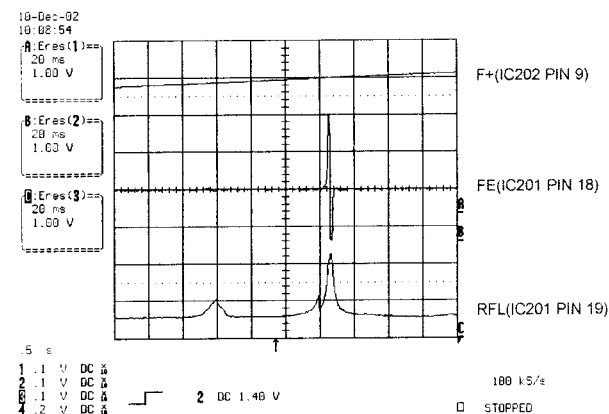


FIG 7-2 (DVD)

7. DISC TYPE JUDGEMENT WAVEFORM

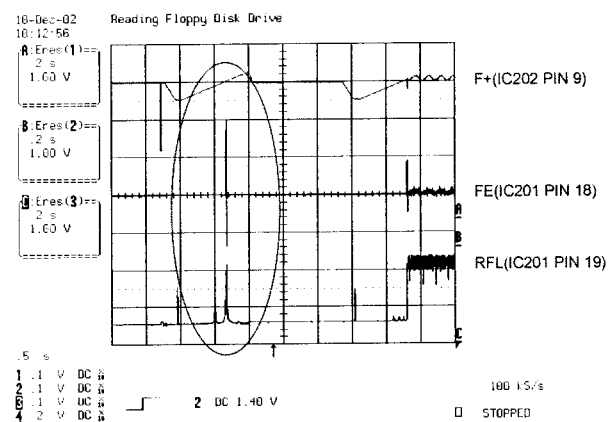


FIG 7-1 (DVD)

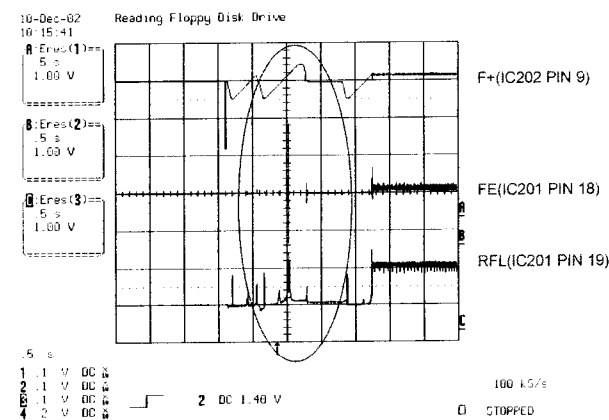


FIG 7-3 (CD)

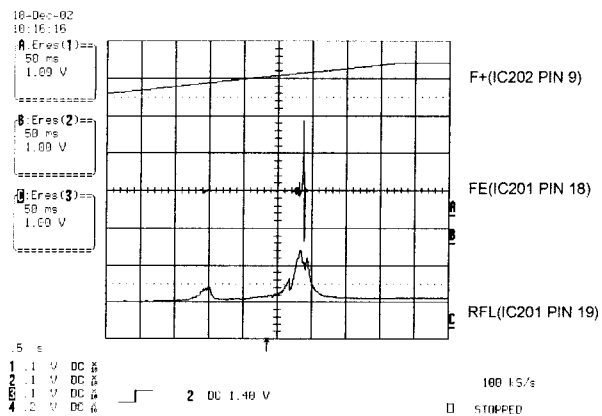


FIG 7-4 (CD)

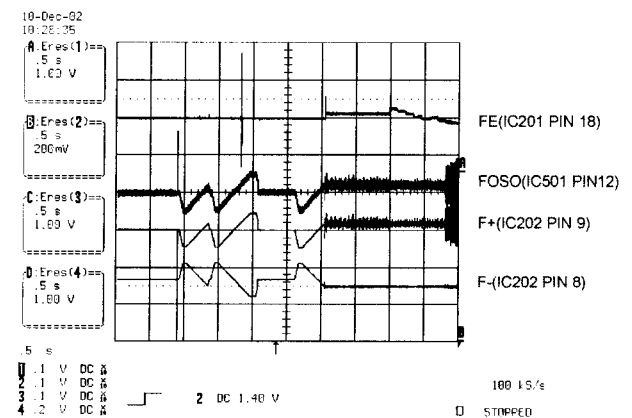


FIG 8-2 (CD)

8. FOCUS ON WAVEFORM

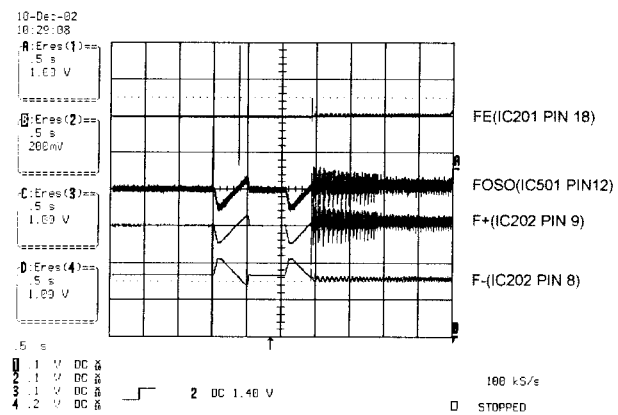


FIG 8-1 (DVD)

9. SPINDLE CONTROL WAVEFORM (NO DISC CONDITION)

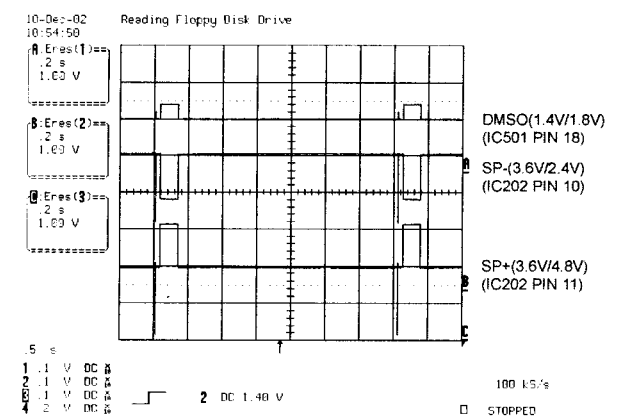


FIG 9-1

10. TRACKING CONTROL RELATED SIGNAL(System checking)

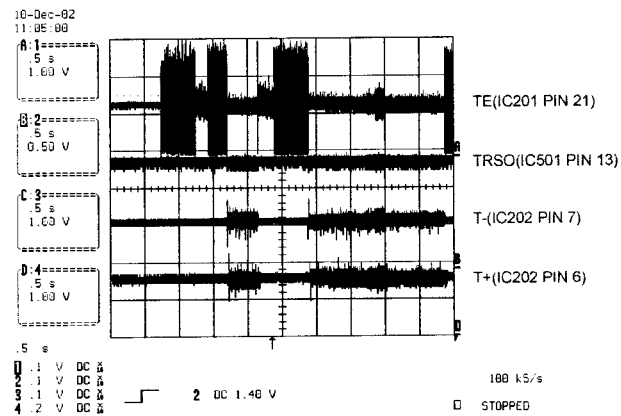


FIG 10-1(DVD)

11. RF WAVEFORM

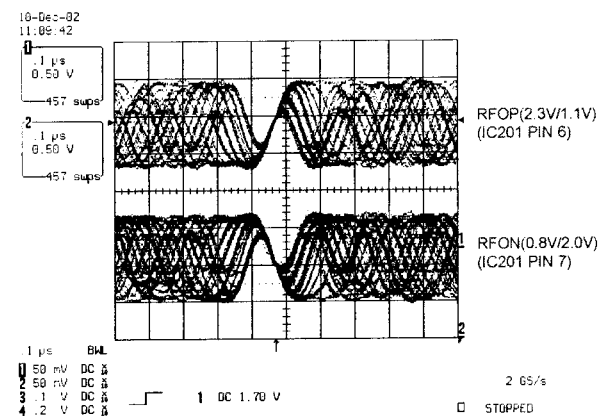


FIG 11-1

12. MT1379 AUDIO OPTICAL AND COAXIAL OUTPUT (ASPDIF)

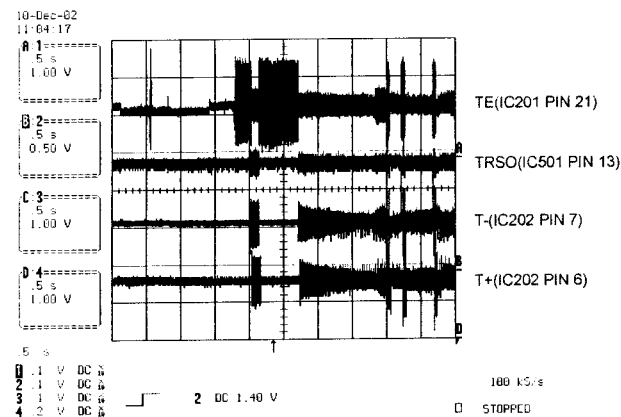


FIG 10-2(CD)

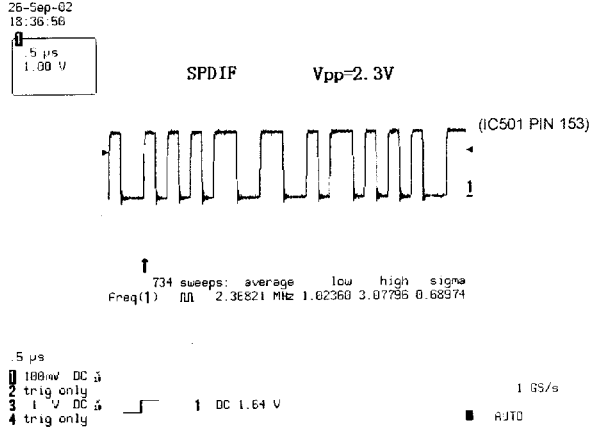


FIG 12-1

13. MT1379 VIDEO OUTPUT WAVEFORM

1) Full colorbar signal(CVBS)

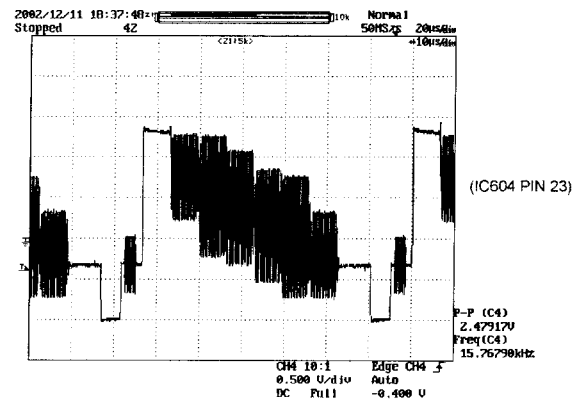


FIG 13-1

2) Y

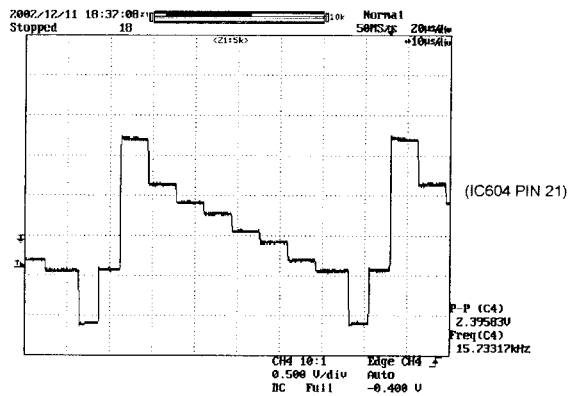


FIG 13-2

3) C

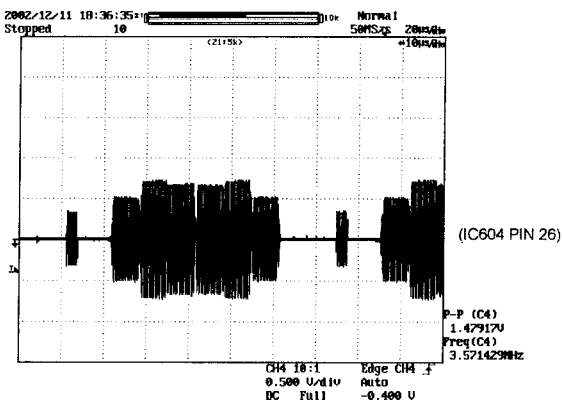


FIG 13-3

14. AUDIO OUTPUT FROM AUDIO DAC

1) Audio L/R

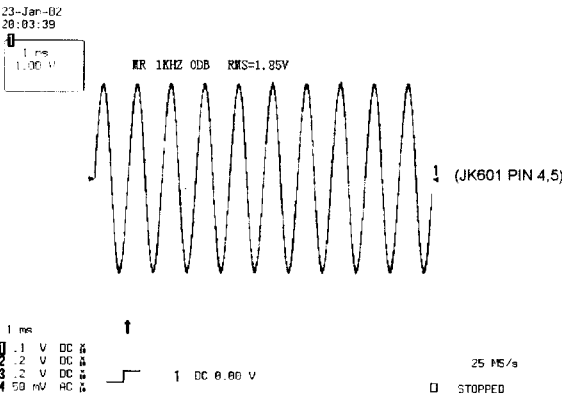


FIG 14-1

23-Jan-02
19:52:51

5 μ s
2.00 V

ASDCA3

ABCK 2.304MHz

ASDCA3(IC501 PIN 157)

ABCK(IC501 PIN 148)

ALRCK 48KHz

ALRCK(IC501 PIN 149)

5 μ s

1 2 V DC 0

2 2 V DC 0

3 2 V DC 0

4 50 mV AC 0

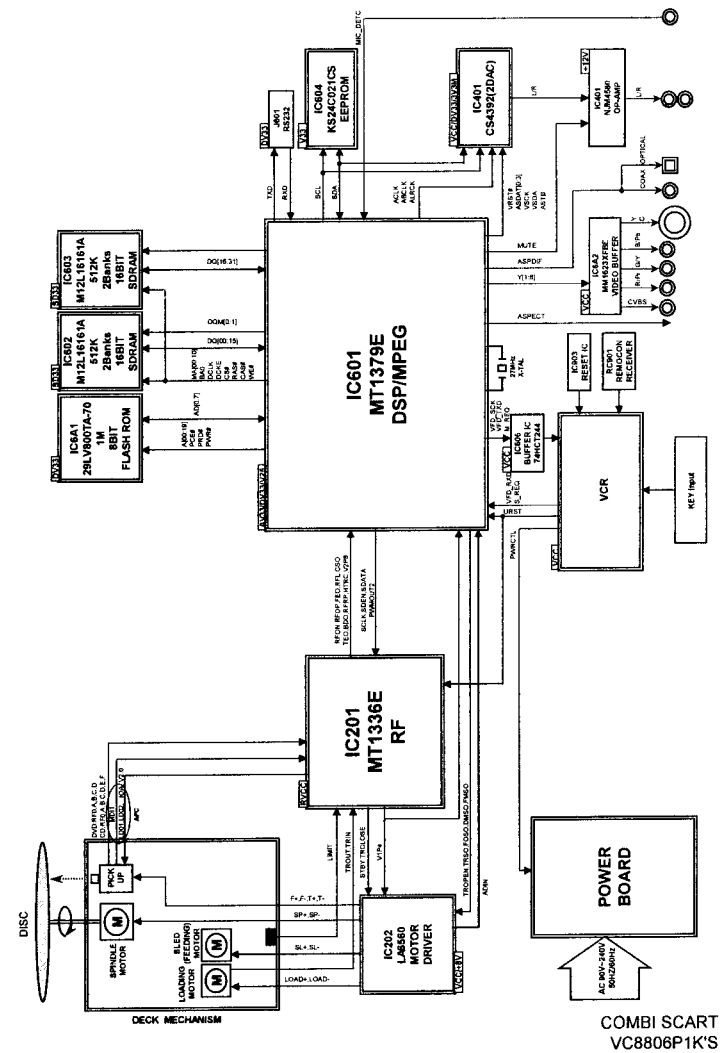
1 DC 1.88 V

500 MS/s

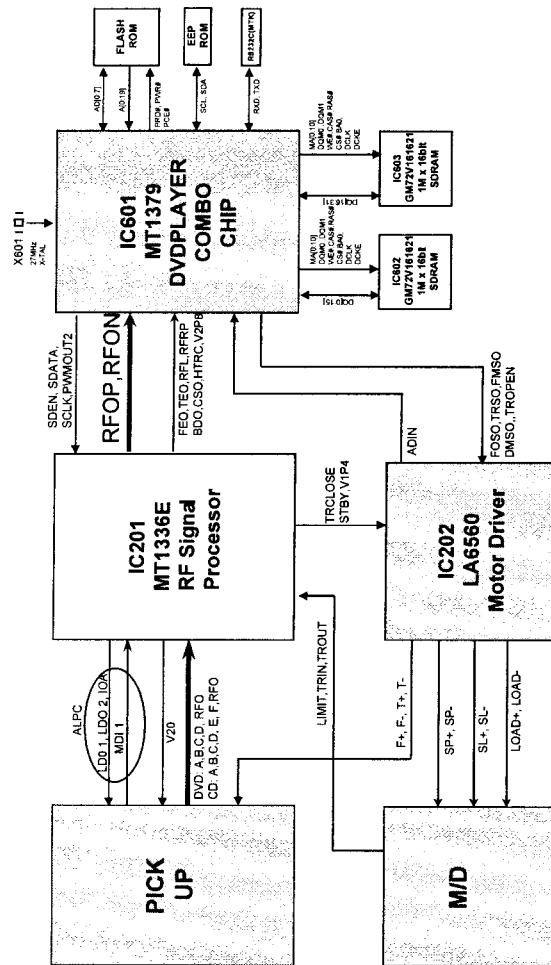
STOPPED

3-80

1. Overall Block Diagram

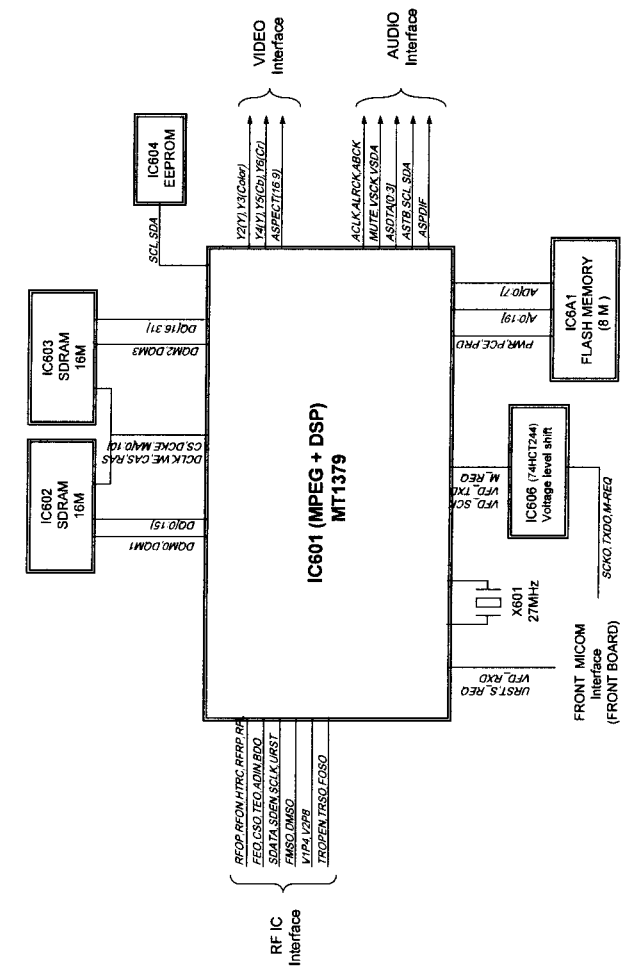


2. SERVO Block Diagram



COMBI SCART
VC8806P1K'S

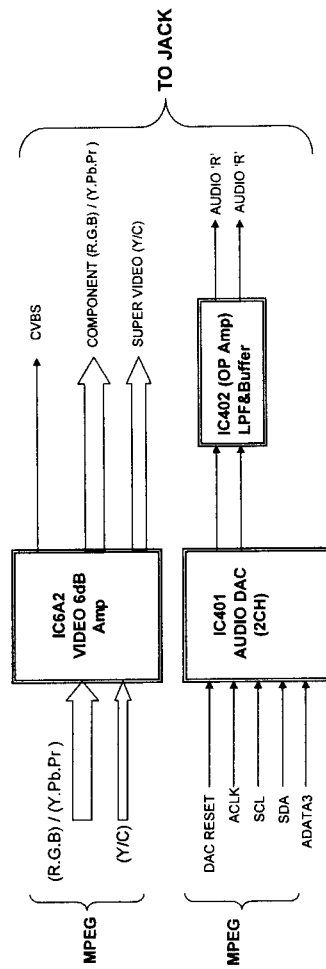
3. MPEG & MEMORY Block Diagram



COMBI SCART
VC8806P1K'S

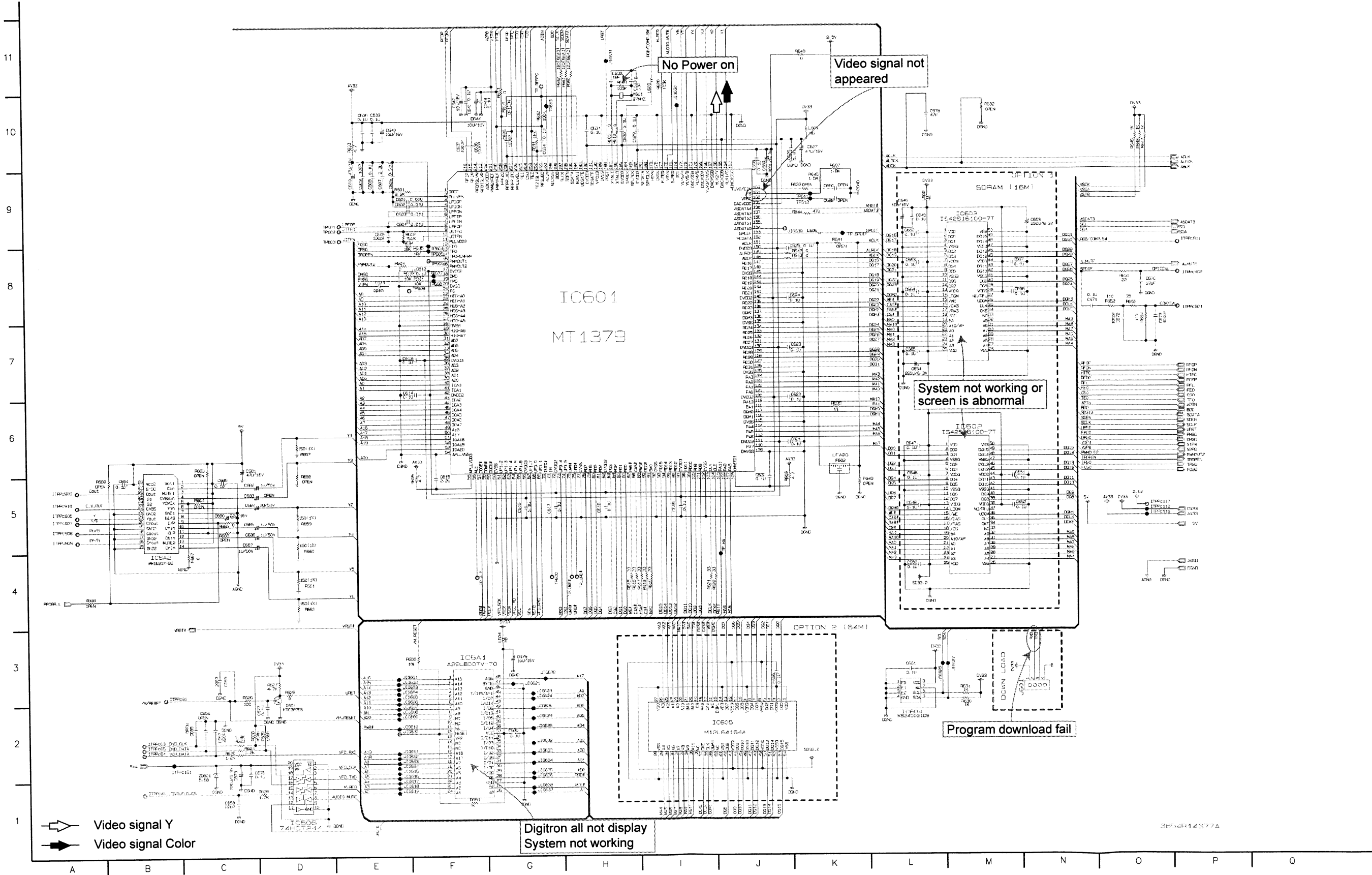
MEMO

4. VIDEO & AUDIO Block Diagram

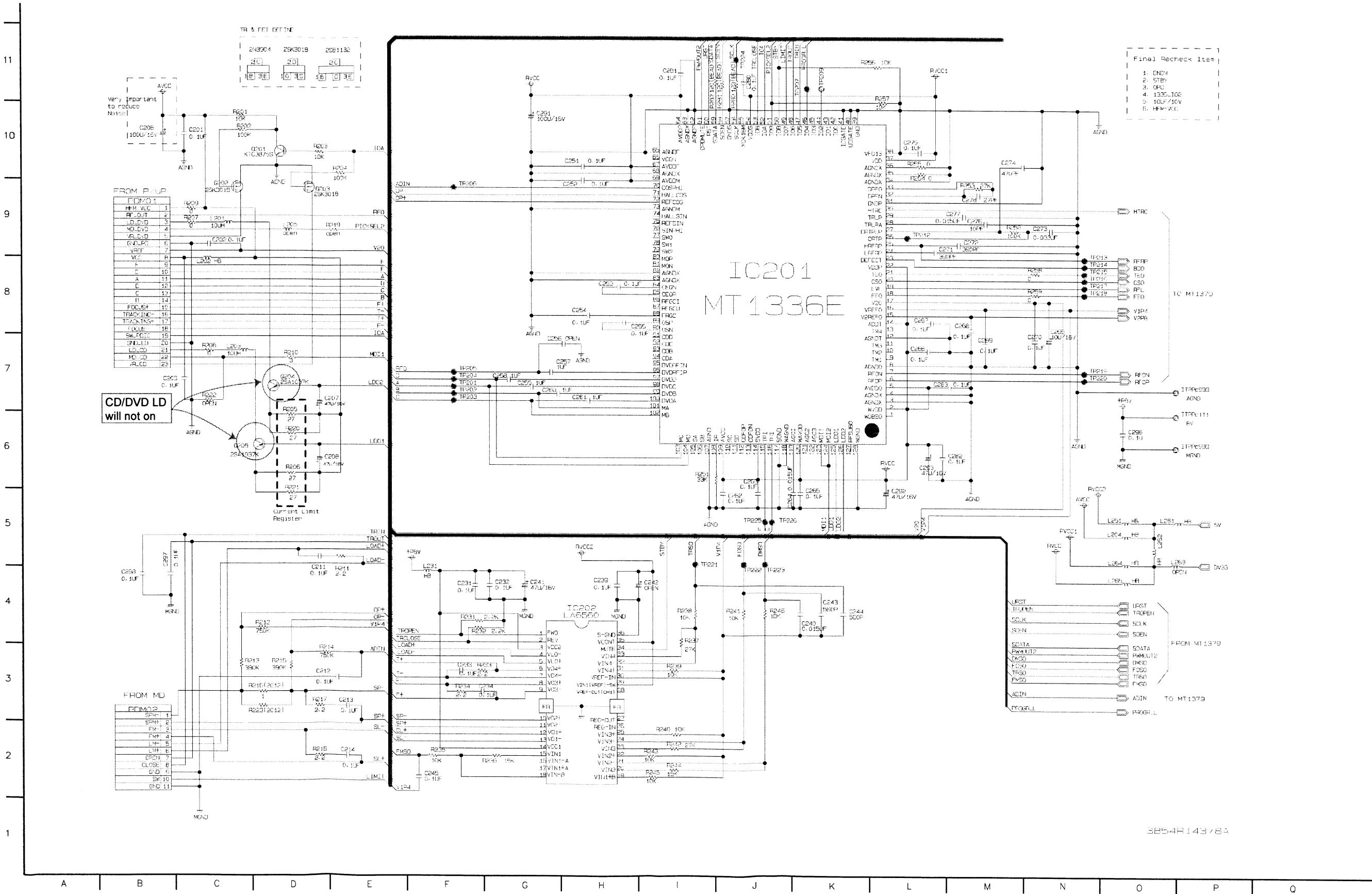


COMBI SCART
VC8806P1K'S

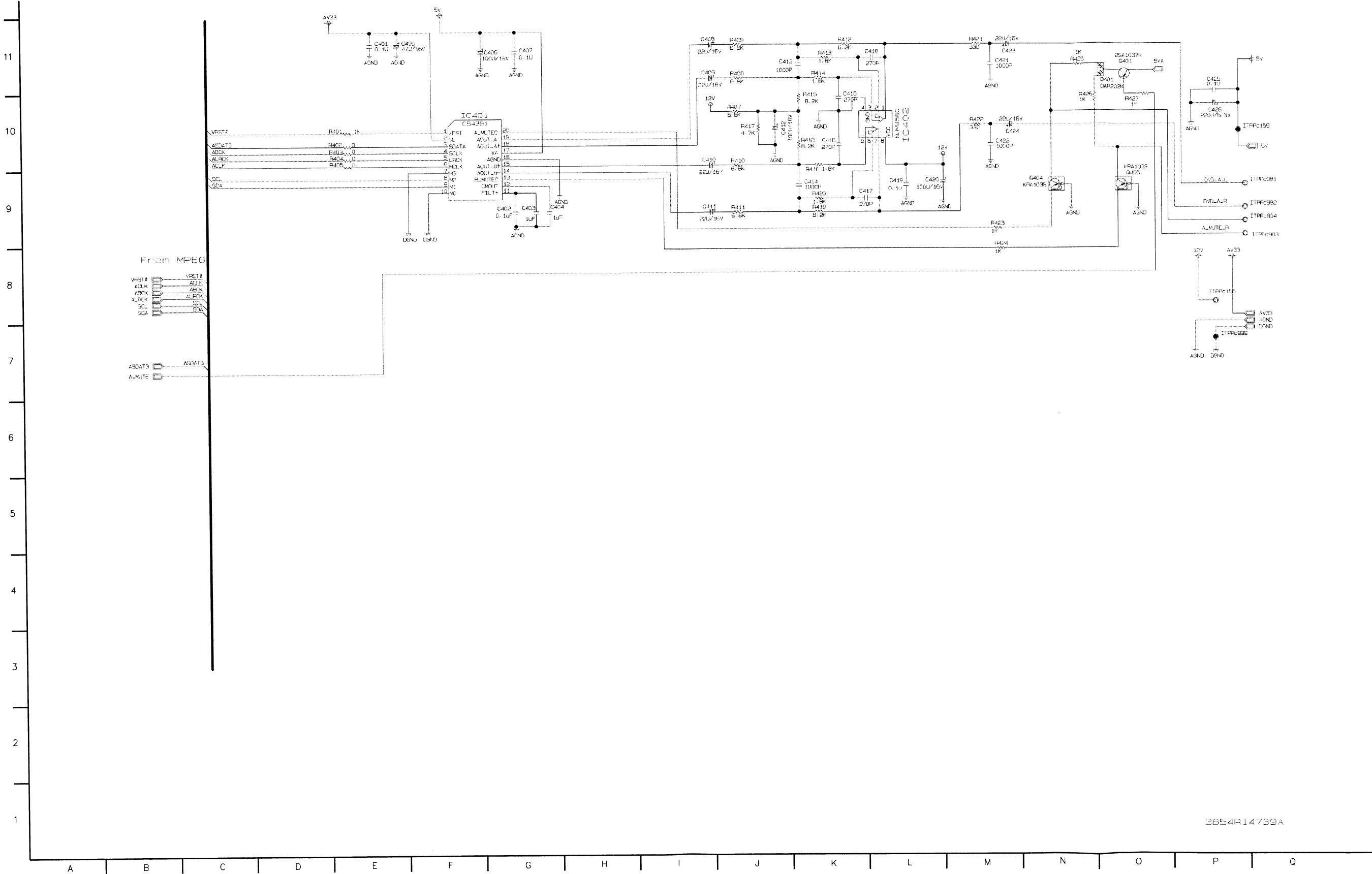
CIRCUIT DIAGRAMS
1. SYSTEM CIRCUIT DIAGRAM



2. RF & DSP SERVO CIRCUIT DIAGRAM



3. AV/JACK CIRCUIT DIAGRAM



3854R14739A

• CIRCUIT VOLTAGE CHART

IC201(MT1338E)			IC202(MOTOR)		IC501(MT1379)		IC502(SDRAM)		IC505(EEPROM)		IC510(BUFFER)		IC5A1(FLASH)		IC401(C64391)		IC402(AMP)		IC5C1(MM1623XPBE)	
PIN	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
1	1.03	2.99	0	0	1.22	1.22	3.27	3.28	0	0	0	0								
2	5.11	5.08	0	0	0	0	1.18	1.26	0	0	2.59	2.55	STOP	PLAY	STOP	PLAY	STOP	PLAY	STOP	PLAY
3	0	0	8.04	8.01	0.96	0.9	1.1	1.52	0	0	0	0	0.08	0.16	3.28	3.29	5.52	5.49	5.09	5.08
4	0	0	0.12	0.06	2	2.06	0	0	0	0	2.59	2.56	1.82	0.45	3.28	3.28	5.52	5.48	2.43	2.42
5	5.11	5.07	0	0.06	0	1.51	0.66	1.07	3.28	3.29	0	0	2.84	0	0	1.65	5.51	5.47	5.09	5.08
6	0	1.95	3.64	3.69	1.48	1.47	0.85	1.12	3.28	3.29	3.24	3.23	2.83	3.12	1.63	1.64	0	0	1.45	0
7	0	0	3.62	3.61	0	1.56	3.27	3.28	0	0	0	0	0.69	0.26	1.64	1.65	5.51	5.48	0	0
8	0	0	3.64	3.53	3.2	1.52	0.51	0.97	3.28	3.29	0.14	0.08	1.72	0.25	1.59	1.61	5.51	5.48	1.45	1.69
9	5.11	0	3.6	3.76	0.12	0.06	3.06	0			0	0	1.92	0.9	0	0	5.52	5.47	0	0
10	5.11	5.08	3.62	2.43	0.12	0.06	0	0			0	0	1.7	1.45	3.28	0	12.03	12.03	2.47	2.46
11	5.11	5.08	3.63	4.85	3.25	3.25	0.06	0.98			0.15	0.09	0	0	3.28	3.29			0	0
12	0	0	3.62	3.72	1.41	1.49	3.18	0.87			0	0	0	0	0	0			1.14	1.76
13	5.11	0	3.64	3.57	1.41	1.41	3.27	3.28			0.15	0.08	3.27	3.29	5.01	5.01			0	0
14	5.11	5.08	8.04	8.01	0	0	2.94	2.56			5.19	5.19	3.56	3.55	2.31	2.31			2.42	2.42
15	2.84	2.81	1.45	1.48	1.42	1.42	0.47	0.42			0.14	0.09	3.29	3.29	4.96	0			5.09	5.08
16	1.45	1.43	0.27	1.39	3.3	0	2.93	3.01			5.25	5.24	0	0	1.42	2.41			2.43	2.42
17	2.08	2.07	0.29	1.32	2.53	2.53	3.21	3.22			0.15	0.08	0.23	0.06	2.4	2.39			0	0
18	1.37	1.42	1.45	1.43	1.42	2.27	2.87	2.95			5.23	5.23	0	0	0	0			2.49	2.47
19	0.69	2.3	1.45	1.43	1.42	1.39	0.15	1.32			0	0	0	0	5.11	5.09			0	0
20	2.4	0	1.45	0.82	0	0	0	0.05			5.25	5.25	0	0.87	2.41	2.41			2.48	2.47
21	2.35	0	1.45	1.43	2.61	2.58	3.09	1.32					1.98	2.64	2.43	2.43			0	0
22	5.11	5.08	1.45	1.43	0.75	1.46	3.09	1.32					2.28	2.18	0	0			1.18	2.3
23	0	0	1.47	1.37	2.83	1	3.09	1.32					2.13	1.96					1.76	2.17
24	2.59	3.2	1.45	1.43	1.9	0.89	3.09	1.33					1.67	2.01					0	0
25	0.19	1.88	1.45	1.43	1.72	0.39	3.27	3.29					1.99	1.72					1.76	2.24
26	1.58	0	0.95	0.91	0.68	0.31	0	0					1.93	2.19					0	0
27	2.56	3.13	0	0	2.84	3.16	0.15	1.36					2.05	1.94					0	0
28	2	2.01	1.45	1.43	0	0	1.84	2.36					0	0					0	0
29	2	2.06	5.15	5.11	2.85	0.66	1	2.32					0	0					0.06	0.05
30	2.96	1.52	1.45	1.43	1.83	0.49	0.54	1.75					0	0					5.09	0
31	0	0	1.45	1.43	0.91	1.39	0.06	0.06					1.49	2.03						
32	0.06	2.07	1.45	1.43	1.43	1.2	0.05	0.06					0.16	1.07						
33	0.07	2.07	1.46	1.45	1.51	1.57	0	0					1.96	1.25						
34	0	0	5.08	5.06	1.51	1.43	0.73	1.26					0.16	1.1						
35	0	0	5.15	5.11	3.3	3.29	1.48	1.55					0.99	2.2						
36	0	0	0	0	0.81	1.26	2.91	2.53					1.17	1.07						
37	5.13	0			1.45	1.02	0.07	0					0.79	1.82						
38	0	0			1.82	1.6	3.27	3.28					0.15	1.07						
39	0	0			1.2	1.5	1.06	1.05					3.29	3.3						
40	0	0			2	2.06	0.47	0.98					1.93	3.09						
41	0	0			2.17	1.95	0	0					0.16	1.07						
42	5.12	5.09			2.53	2.52	0	0.6					1.5	2.2						
43	5.12	5.09			1.96	1.9	1.12	1.24					0.16	1.07						
44	5.12	5.09			1.79	1.9	3.27	3.28					1.21	2.64						
45	5.12	5.09			0.8	1.72	1.21	0.99					0.16	1.08						
46	5.12	5.09			0.8	1.96	1.31	1.34					1.64	1.48						
47	0	0			0.8	1.84	0	0					2.05	2.06						
48	5.12	5.09			3.3	2.63	1.43	1.44					0	0						
49	5.12	0			0	0.13	0.88	1.01					0	0						
50	5.08	5.06			0	0.07	0	0					0.07	0.13						
51	5.09	5.07			0	0														
52	5.1	0			0	0														
53	0	0			0	0														
54	5.13	0			0	0														
55	0.09	0.2			3.25	3.27														
56	1.61	0			1.21	1.18														
57	0	0			0	0														
58	0	0			3.29	3.29														
59	0	0			0	0														
60	0	0			0	0														
61	3.28	0			2.59	2.57														
62	0	0			2.58	2.58														
63	0	0			0	0														
64	0	0			2.59	2.56														
65	0	0			3.29	3.29														
66	0.26	0			3.3	3.29														
67	5.12	5.08			3.29	3.29														
68	0	0			2.57	2.56														
69	5.12	0			5.19	5.18														
70	3.21	2.03			2.59	2.57														
71	3.46	2.2			0.12	0.08														
72	2.81	0			2.53	2.52														
73	0	0			2.59	2.57														
74	0.21	0.09			3.29	3.29														
75	0.22	0			2.61	2.61														
76	0	0.1			3.27	3.24														
77	0.21	0.09			0	0														
78	0.23	0.09			0.94	1.04														
79	0.21	0.08			0.78	1.06														
80	0.23	0.08			0.89	1.15														

[illegible]

SECTION 4 MECHANISM (D-37)

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GUIDE FOR TROUBLESHOOTING

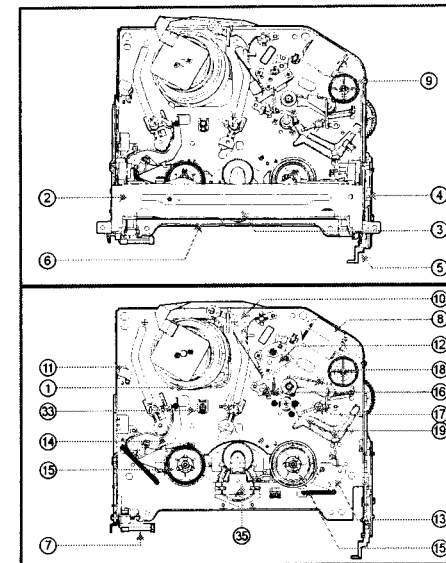
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EXPLODED VIEWS

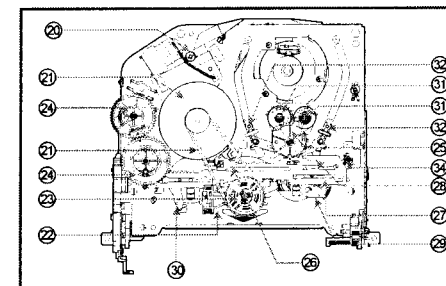
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POSITION DRAWING OF DECK MECHANISM PARTS

• Top View



• Bottom View



NOTE : Assembly order is a reverse of disassembly order.

- (1) For assembly, check the assembly mode is accurate.
- (2) Parts firstly disassembled indicate parts firstly disassembled in disassembly of related parts.

Order Of Dis- assembly Parts firstly Disassembled	Part	Fixing Type	Ref. Draw- ings	Posi- tion
	1 Drum Assembly	3 screws	A-1	T
	2 Plate Top	2 hooks	A-2	T
2	3 Holder Assembly CST	6 chasses	A-2	T
2,3	4 Gear Assembly Rack F/L	1 hook	A-2	T
2,3,4	5 Opener Door	Chassis Hole	A-2	T
2,3,4,5	6 Arm Assembly F/L	Chassis Hole	A-2	T
	7 Lever Assembly S/W	Chassis Hole, 1 hook	A-2	T
	8 Motor Assembly L/D	1 screw	A-3	T
	9 Gear Wheel	2 hooks	A-3	T
	10 Arm Assembly Cleaner	Chassis Embossing	A-3	T
	11 Head F/E	Chassis Embossing	A-3	T
	12 Base Assembly A/C Head	1 screw	A-3	T
2,3	13 Brake Assembly T	1 hook	A-4	T
2,3	14 Arm Assembly Tension	1 hook	A-4	T
2,3,13,14	15 Reel S / Reel T	Shaft	A-4	T
	16 Base Assembly P4	Chassis Embossing	A-5	T
	17 Opener Lid	Chassis Embossing	A-5	T
17	18 Arm Assembly Pinch	Shaft	A-5	T
17	19 Arm T/up	1 hook	A-5	T
	20 Supporter, capstan	Chassis Hole	A-6	B
17,18	21 Belt Capstan/Motor Capstan	3 screws	A-6	B
	22 Lever F/R	Locking Tab	A-6	B
21,22	23 Clutch Assembly D37	Washer	A-6	B
	24 Gear Drive/Gear Cam	Washer/Hook	A-7	B
	25 Gear Sector	Hook	A-7	B
21	26 Brake Assembly Capstan	Chassis Hole	A-7	B
21,22,23, 24,25,26	27 Plate Slider	Chassis Guide	A-7	B
21,22,23, 24,25,26,27	28 Lever Tension	1 Hook	A-7	B
21,22,23, 24,25,26,27	29 Lever Spring	1 Hook	A-7	B
21,22,23, 24,25,26,27	30 Lever Brake	1 Hook	A-7	B
25	31 Gear Assembly P2/ Gear Assembly P3	Bass	A-8	B
2,3,14, 25,31	32 Base Assembly P2 /Base Assembly P3	6 Chasses	A-8	B
25,31	33 Base Loading	3 Hooks	A-8	B
2,3,14	34 Base Tension	Chassis Embossing	A-9	T
	35 Arm Assembly Idler Jog	Locking Tab	A-9	T

T:Top, B:Bottom

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

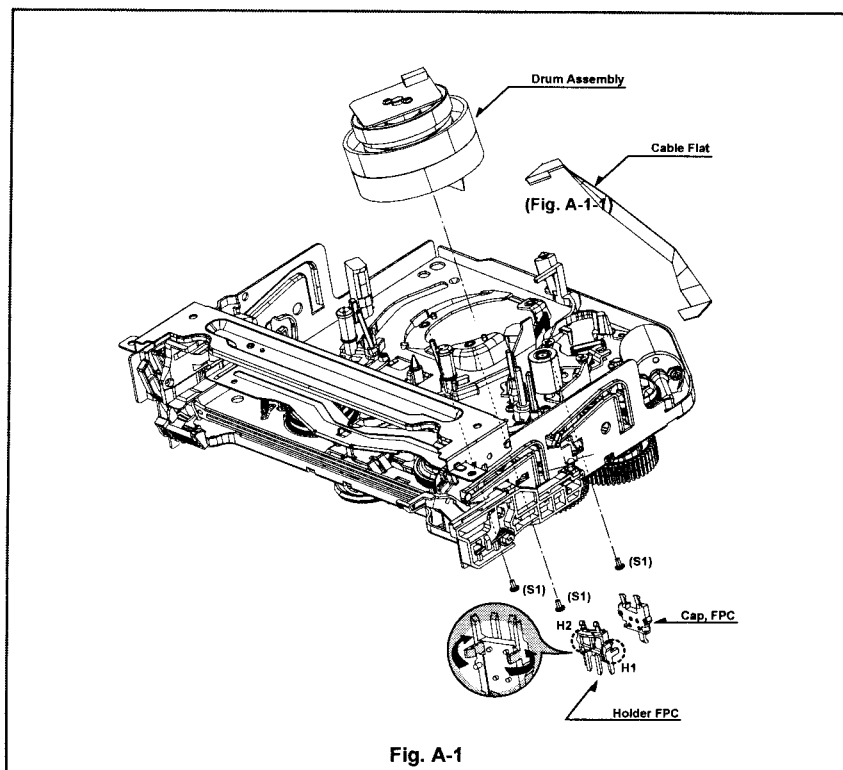
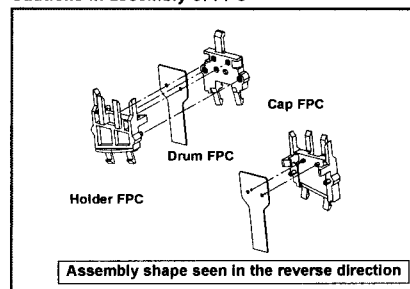


Fig. A-1

1. Disassembly of Drum Assembly (Figure A-1)

- 1) Separate cable flat from the Drum FPC and the Capstan Motor.
- 2) Release 3 screws (S1) on the bottom side of the chassis, and separate the drum assembly.
- 3) Release the hooks (H1, H2) and separate both the holder FPC and the Cap FPC (disassemble if necessary).

Cautions in assembly of FPC



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

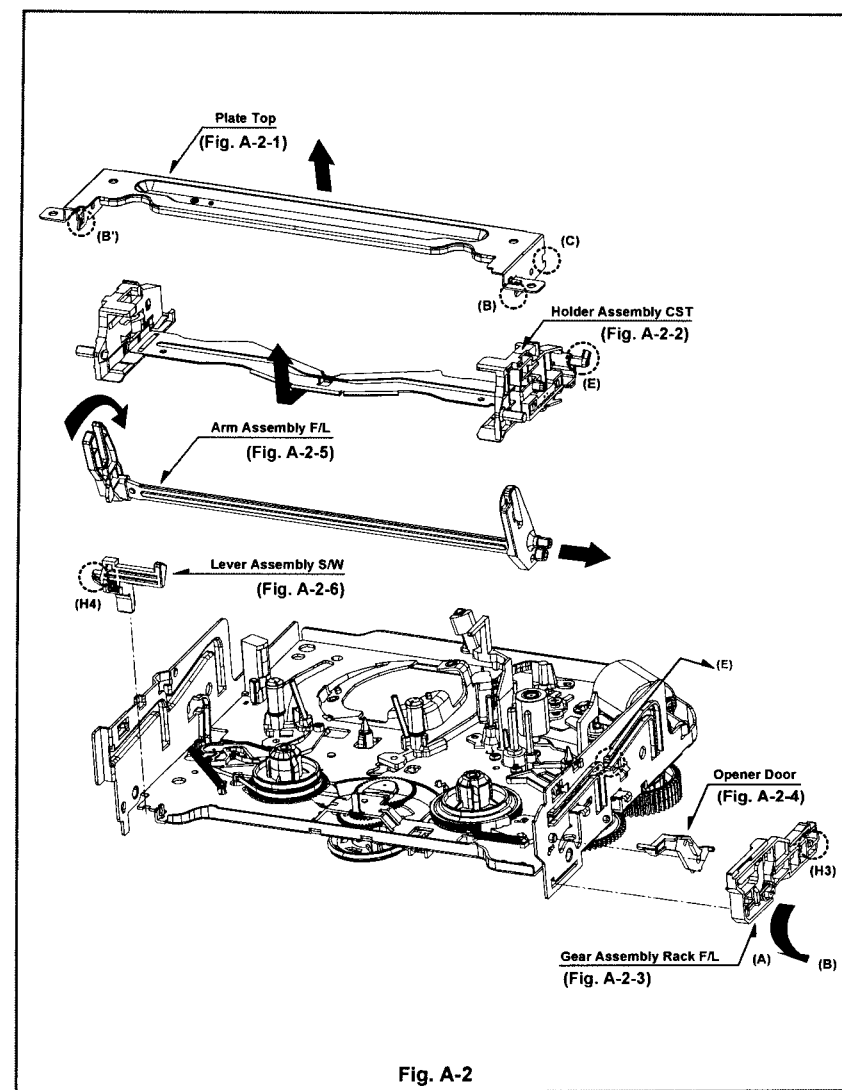


Fig. A-2

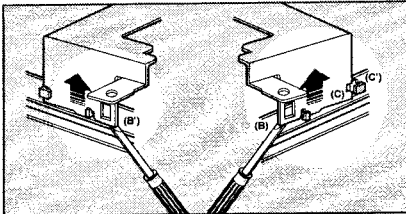
DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

2. Disassembly of Plate Top (Fig. A-2-1)

- 1) Separate the right part while leaning back the (B) part of the plate top toward the arrow direction.
- 2) Separate the left part while leaning back the (B') part of the plate top toward the arrow direction.
(Tool used: Tool such as (-) driver, auger, etc with pointed or flat end)

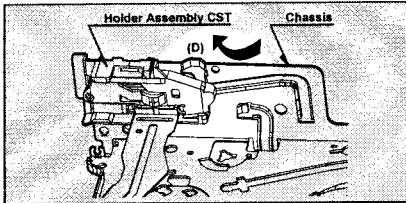
CAUTIONS

Assemble while pressing the (C), (C') part after corresponding them as in drawing.



3. Holder Assembly CST (Fig. A-2-2)

- 1) Firstly separate the left part from the groove on the (D) part of chassis while moving the holder assembly CST toward the arrow direction.



- 2) Separate the right part from each groove of chassis

CAUTIONS

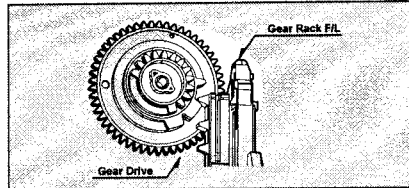
Assemble by inserting the left part after firstly inserting the (E) part of the holder assembly CST into the groove on the (E') part of chassis.

4. Disassembly of Gear Assembly Rack F/L (Fig. A-2-3)

- 1) Separate the hook (H3) while leaning ahead the hook (3) after moving the gear assembly rack F/L toward the arrow (A) direction.
- 2) Separate the gear assembly rack F/L toward the arrow (B) direction.

CAUTIONS

For the assembly, correspond the gear part of gear assembly rack F/L to the gear drive.



5. Opener Door (Fig. A-2-4)

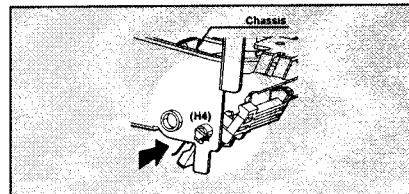
- 1) Separate the opener door ahead from the guide hole of chassis while turning it clockwise.

6. Arm Assembly F/L (Fig. A-2-5)

- 1) Firstly separate the left part of the arm assembly F/L from the groove of chassis while pushing the arm assembly F/L toward the arrow direction.
- 2) Separate the right part from the groove of chassis.

7. Lever Assembly S/W (Fig. A-2-6)

- 1) Separate the lever assembly S/W while pushing it toward the arrow direction after removing the hook (4) on the left side of chassis.



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

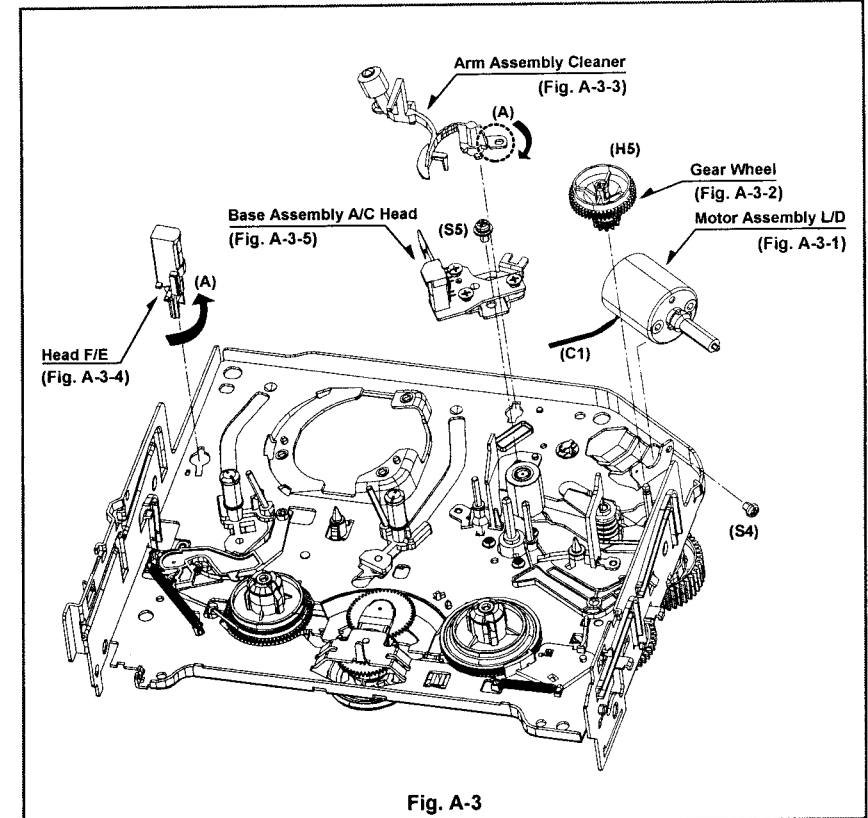


Fig. A-3

8. Motor Assembly L/D (Fig. A-3-1)

- 1) Take the connector (C1) connected to the Capstan motor PCB out.
- 2) Remove a screw (S4) of the chassis (S4) and step backward, and disassemble it while holding it up.

9. Gear Wheel (Fig. A-3-2)

- 1) Release the hook (H5) of the gear wheel and disassemble it upward.

10. Arm Assembly Cleaner (Fig. A-3-3)

- 1) Separate the (A) part of Fig. A-3-1 from the embossing of chassis, and hold it up while turning it anti-clockwise.

11. Head F/E (Fig. A-3-4)

- 1) Separate the (A) part of the head F/E from the embossing of chassis, and hold it up while turning it anti-clockwise.

12. Base Assembly A/C Head (Fig. A-3-5)

- 1) Release a screw (S5) and disassemble while holding it up.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

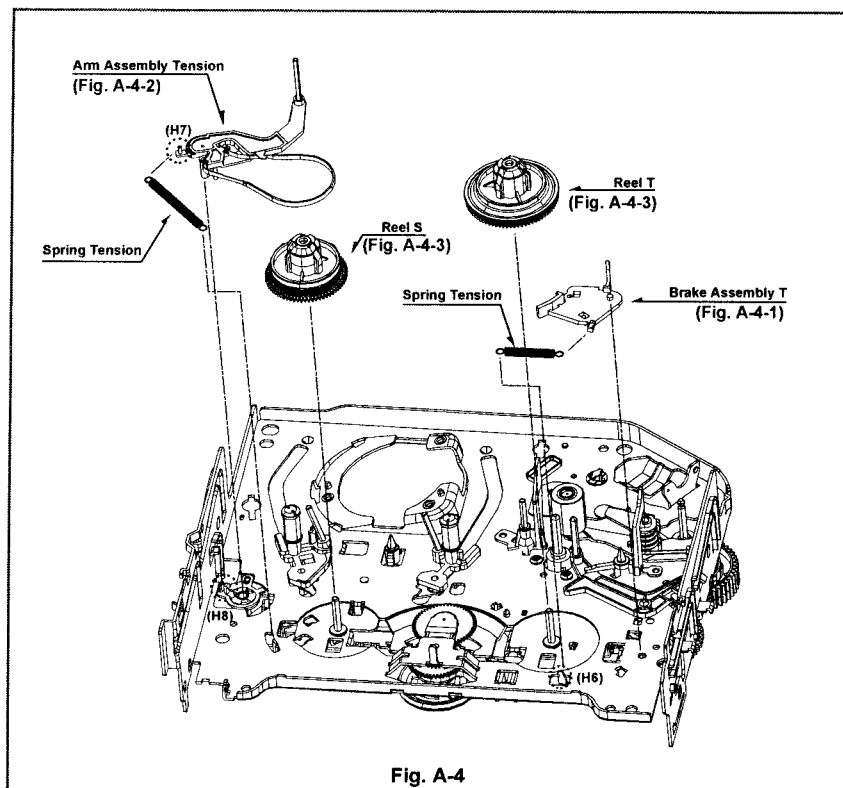


Fig. A-4

13. Brake Assembly T (Fig. A-4-1)

- 1) Release the spring tension from the lever spring hook (H6).
- 2) Disassemble the brake assembly T while holding it upward.

14. Arm Assembly Tension (Fig. A-4-2)

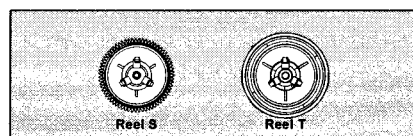
- 1) Release the spring tension the hook (H7) from the arm assembly tension.
- 2) After releasing the hook (H8) of the base tension, separate it while holding it up.

CAUTIONS

Spring used for both brake assembly T and arm assembly tension is used (2EA used).

15. Reel S/Reel T (Fig. A-4-3)

- 1) Disassemble the reel S/ reel T while holding it up (comparison between Reel S and Reel T)



DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

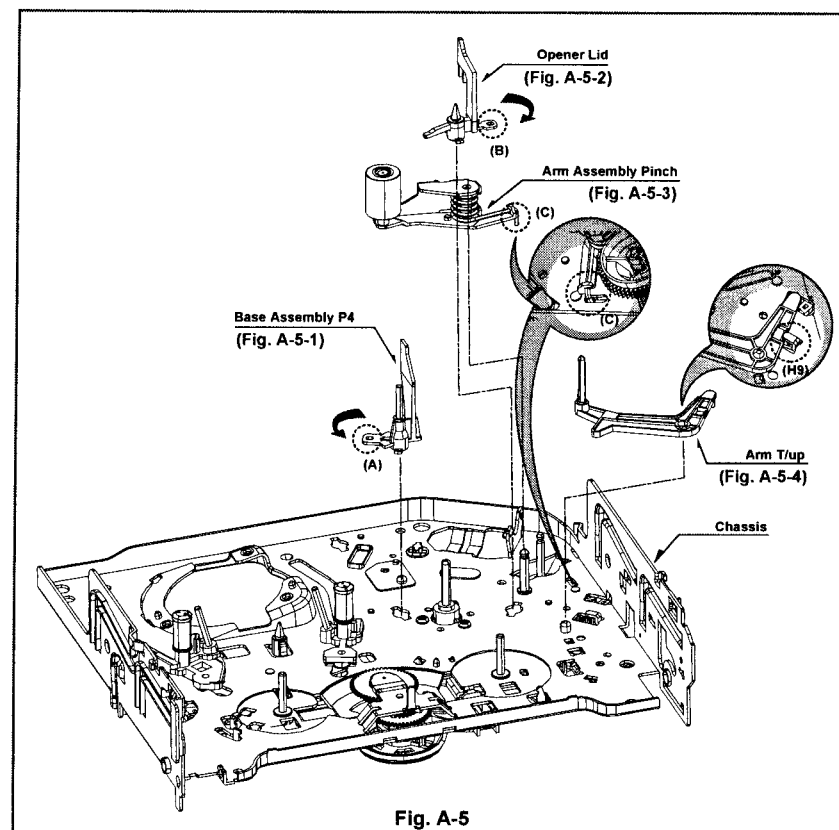


Fig. A-5

16. Base Assembly P4 (Fig. A-5-1)

- 1) Release the (A) part of the base assembly P4 from the embossing of chassis.
- 2) Hold the base assembly P4 up while turning it anti-clockwise.

17. Opener Lid (Fig. A-5-2)

- 1) Release the (B) part of the opener lid from the embossing of chassis.
- 2) Disassemble the opener lid upward while turning it anti-clockwise.

18. Arm Assembly Pinch (Fig. A-5-3))

- 1) Hold the arm assembly pinch up.

19. Arm T/up (Fig. A-5-4)

- 1) Turn the arm T/up to release the anchor jaw (H9) part of chassis and then hold it upward.

CAUTIONS

For the assembly, check the (C) part of the arm assembly pinch is assembled as in drawing.

- REVERSE THE MECHANISM.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

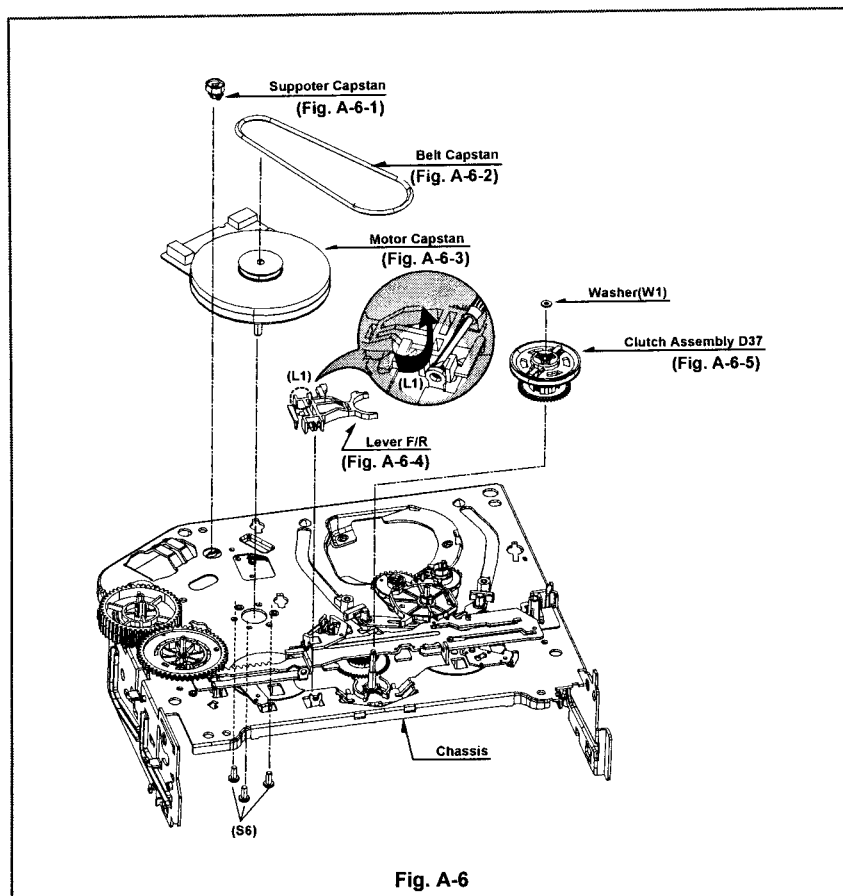


Fig. A-6

20. Supporter, Capstan (Fig. A-6-1)

- 1) Turn the supporter and Capstan by 90 deg. clockwise with a driver for disassembly.

21. Belt Capstan (Fig. A-6-2) / Motor Capstan (Fig. A-6-3)

- 1) Separate the belt Capstan.
- 2) Undo 3 screws (S6) on the bottom side of chassis and disassemble it upward.

22. Lever F/R (Fig. A-6-4)

- 1) Release the locking tab (L1) and then disassemble it upward.

23. Clutch Assembly D37 (Fig. A-6-5)

- 1) Remove the washer (W1) and then disassemble it upward.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

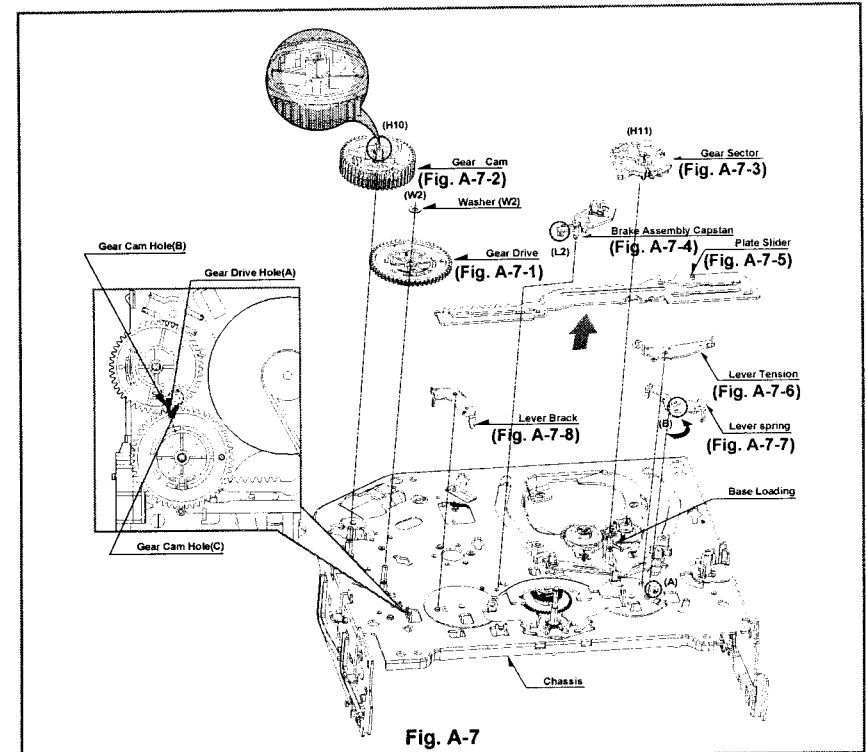


Fig. A-7

24. Gear Drive (Fig. A-7-1) / Gear Cam (Fig. A-7-2)

- 1) Remove the washer (W2) and then disassemble the gear drive.
- 2) Release the hook (H10) of the gear cam and then disassemble it upward.

CAUTIONS

For the assembly, adjust both the gear driver hole (A) and the gear cam hole (B) straightly and then correspond the gear cam hole (C) to the chassis hole.

25. Gear Sector (Fig. A-7-3)

- 1) Release the hook (H11) of the gear sector and then hold the gear sector upward.

26. Brake Assembly Capstan (Fig. A-7-4)

- 1) Release the locking tab (L2) on the bottom side of the plate slider and then disassemble it upward.

27. Plate Slider (Fig. A-7-5)

- 1) Disassemble the plate slider while holding it up.

28. Lever Tension (Fig. A-7-6)

- 1) Release the lever tension from the guide (A) of chassis while turning it anti-clockwise.
- 2) Disassemble the lever tension while holding it up.

29. Lever Spring (Fig. A-7-7)

- 1) Release the (B) part of the lever spring from the guide (A) of chassis while turning it anti-clockwise.
- 2) Disassemble the lever tension while holding it up.

30. Lever Brake (Fig. A-7-8)

- 1) Disassemble the lever brake while holding it up.

DECK MECHANISM DISASSEMBLY

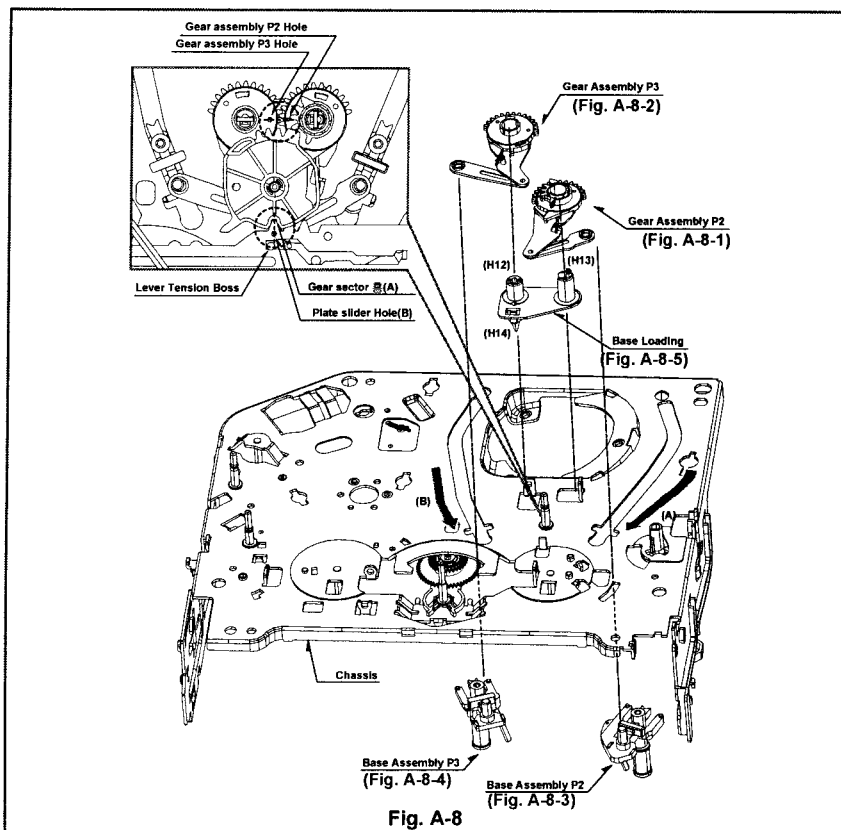


Fig. A-8

31. Gear Assembly P2 (Fig. A-8-1)/ Gear Assembly P3 (Fig. A-8-2)

- 1) Hold the gear assembly P2 upward.
- 2) Hold the gear assembly P3 upward.

CAUTIONS

For the assembly, check the holes of both the gear assembly P2 and the P3 are adjusted straightly, and then correspond the gear section groove (A) to the plate slider hole (B).

32. Base Assembly P2 (Fig. A-8-3)/ Base Assembly P3 (Fig. A-8-4)

- 1) Disassemble the base assembly P2 downward while moving it toward the arrow (A) direction along with the guide hole of chassis.
- 2) Disassemble the base assembly P2 downward while moving it toward the arrow (B) direction along with the guide hole of chassis.

33. Base Loading (Fig. A-8-5)

- 1) Release 3 hooks (H12, 13, 14) of the base loading, and then disassemble them upward.
- Reverse the mechanism.

DISASSEMBLY AND ASSEMBLY OF DECK MECHANISM

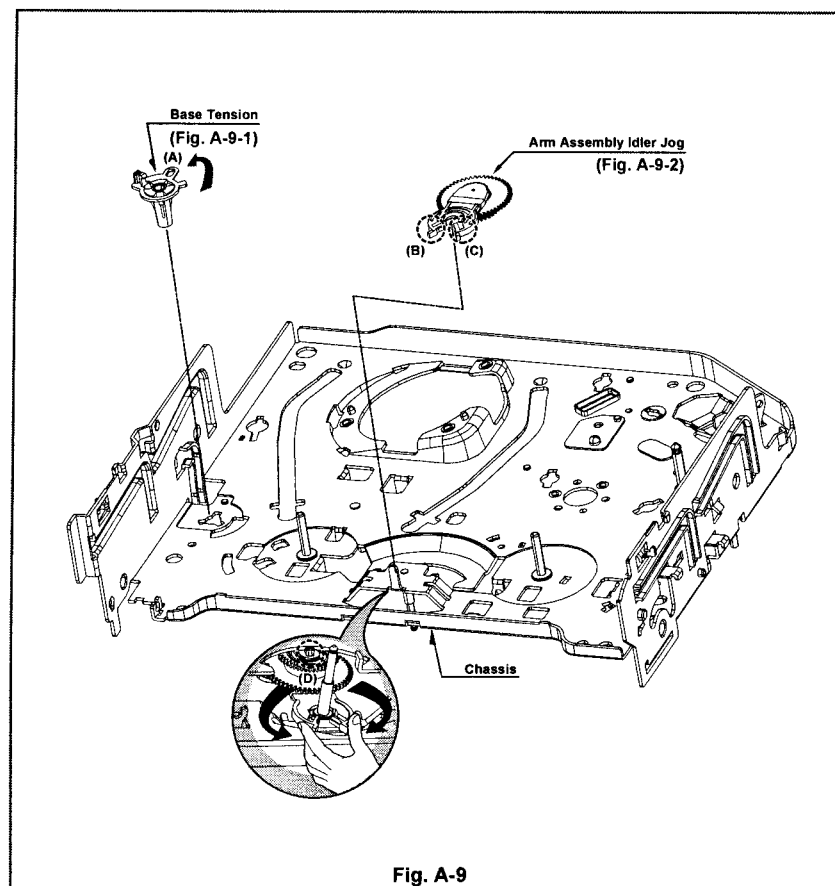


Fig. A-9

34. Base Tension (Fig. A-9-1)

- 1) Release the (A) part of the base tension from the embossing of chassis.
- 2) Hold the base tension upward while turning it anti-clockwise.

35. Arm assembly Idler Jog (Fig. A-9-2)

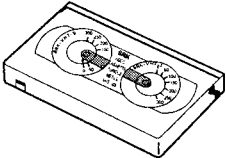
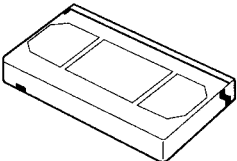
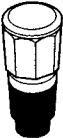

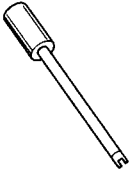
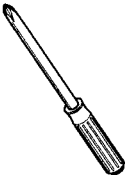
- 1) Push both (B), (C) parts in Fig. A-9-2 toward the arrow direction.
- 2) Disassemble the arm assembly idler upward.

CAUTIONS

Take care to ensure that the (D) part in the drawing is not hung to chassis in disassembly.

DECK MECHANISM ADJUSTMENT

• Fixtures and Tools for Service

<p>1. Cassette Torque Meter SRK-VHT-303(Not SVC part) Part No:D00-D006</p> 	<p>2. Alignment tape Part No NTSC:DTN-0001 PAL:DTN-0002</p> 	<p>3. Torque gauge 600g.Cm ATG Part No:D00-D002</p> 
<p>4. Torque gauge adaptor Part No:D09-R001</p> 	<p>5. Post height adjusting driver Part No:DTL-0005</p> 	<p>6. + Type driver (ø5)</p> 

DECK MECHANISM ADJUSTMENT

1. Mechanism Assembly Mode Check

Purpose of adjustment : To make tools normally operate by positioning tools accurately.		
Fixtures and tools used	VCR (VCP) status	Checking Position
• Blank Tape (empty tape)	• Eject Mode (with cassette withdrawn)	• Mechanism and Mode Switch
<p>1) Turn the VCR on and take the tape out by pressing the eject button. 2) Separate both top cover and plate top, and check both the hole (A) of gear cam and the hole (A') of chassis correspond (Fig. C-2). 3) If it is done as in the paragraph 2): Turn the gear cam as in No.2) after mantling the motor assembly L/D. 4) Undo the screw fixing the deck and the main frame, and separate the deck assembly. Check both the hole (A) of gear cam and the hole (A') of chassis correspond (Fig. C-1). 5) Check the mode S/W on the main P.C. board locates at a proper position as in (B) of the Fig. (C-1). 6) Connect the deck to the main P.C. board and perform all types of test.</p>		

CHECK DIAGRAM

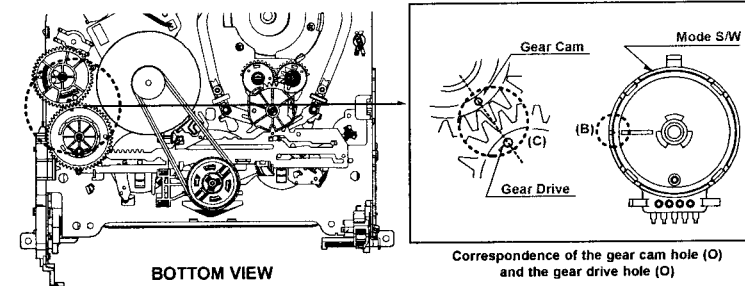


Fig. C-1

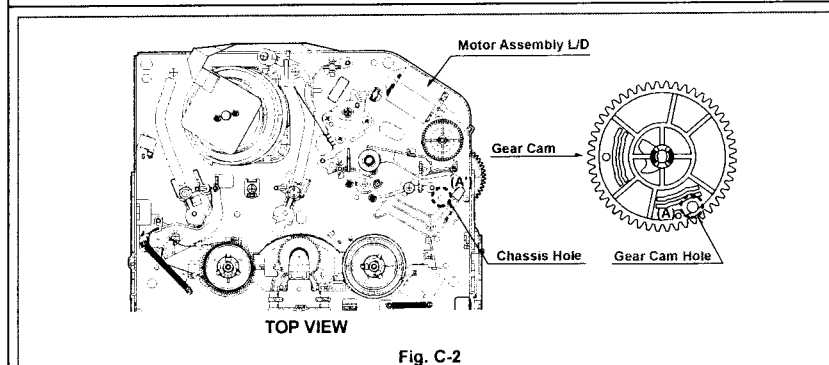


Fig. C-2

DECK MECHANISM ADJUSTMENT

2. Previous Preparation for Deck Adjustment

(Preparation to load the VCR (VCP) with cassette tape not inserted)

- 1) Take the power cord from the consent.
- 2) Separate the top cover and the plate assembly top.
- 3) Insert the power cord into again.
- 4) Turn the VCR (VCP) on and load the cassette while pushing the lever stopper of the holder assembly CST backward. In this case, clog both holes on the housing rail part of chassis to prevent detection of the end sensor.

If doing so, proceeding to the stop mode is done. In this status, input signals of all modes can be received. However, operation of the Rewind and the Review is impossible since the take-up reel remains at stop status and so cannot detect the reel pulse (however, possible for several seconds).

3. Torque Measuring

Purpose of Measuring : To measure and check the reel torque on the take-up part and the supply part that performs basic operation of the VCR (VCP) for smoothly forwarding the tape.
Measure and check followings when the tape is not smoothly wound or the tape velocity is abnormally proceeded:

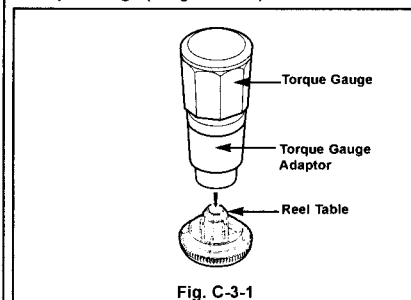
Fixtures and tools used	VCR (VCP) status	Measuring method
<ul style="list-style-type: none"> • Torque Gauge (600 g.cm ATG) • Torque Gauge Adaptor • Cassette Torque Meter SRK-VHT-303 	<ul style="list-style-type: none"> • Play (FF) or Review (REW) Mode 	<ul style="list-style-type: none"> • Try to operate the VCR (VCP) per mode with the tape not inserted (See '2. Prior Preparation for Deck Adjustment'). • Measure after adhering and fixing the torque gauge adaptor to the torque gauge (Fig. C-3-1) • Read scale of the supply or take-up part of the cassette torque meter (Fig. C-3-2).

Item	Mode	Instruments	Reel Measured	Measuring Value
Fast forward Torque	Fast Forward	Torque Gauge	Take-Up Reel	More than 400g°cm
Rewind Torque	Rewind	Torque Gauge	Supply Reel	More than 400g°cm
Play Take-Up Torque	Play	VHT-303	Take-Up Reel	40~100g°cm
Review Torque	Review	VHT-303	Supply Reel	120~210g°cm

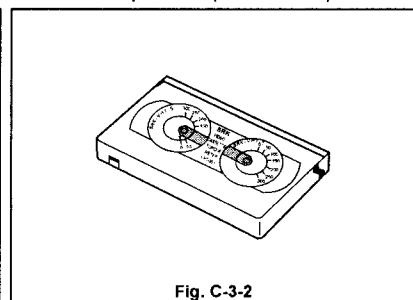
NOTE

Adhere the torque gauge adaptor to the torque gauge for measuring the value.

• Torque Gauge (600g.cm ATG)



• Cassette Torque Meter (SRK-VHT-303)



DECK MECHANISM ADJUSTMENT

4. Guide Roller Height Adjustment

Purpose of adjustment : To ensure that the bottom surface of the tape can travel along with the tape lead line of the lower drum by constantly and adjusting and maintaining the height of the tape.

4-1. Prior Adjustment

Fixtures and tools used	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> • Post Height Adjusting Driver 	<ul style="list-style-type: none"> • Play or Review Mode 	<ul style="list-style-type: none"> • The guide roller height adjusting screw on the supply guide roller and the take-up guide roller
Adjustment Procedure 1) Travel the tape and check the bottom surface of the tape travels along with the guide line of the lower drum. 2) If the tape travels toward the lower part of guide line on the lower drum, turn the guide roller height adjusting screw to the left. 3) If it travels to the upper part, turn it to the right. 4) Adjust the height of the guide roller to ensure that the tape is guided on the guide line of the lower drum at the inlet/outlet of the drum. (Fig. C-4-1)		ADJUSTMENT DIAGRAM <p>Fig. C-4-1</p>

4-2. Fine Adjustment

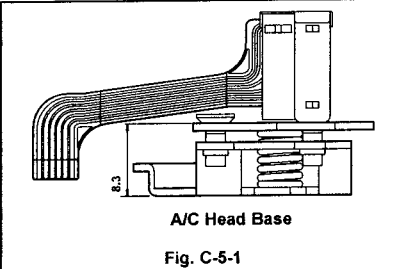
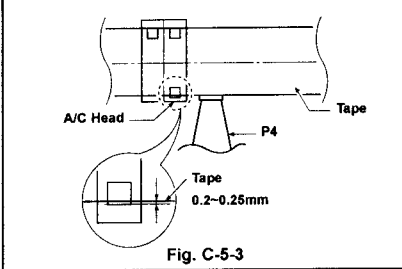
Fixtures and tools used	Measuring tools and connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> • Oscilloscope • Standard test tape • Post height adjusting driver 	<ul style="list-style-type: none"> • CH-1: PB RF Envelope • CH-2: NTSC : SW 30Hz PAL : SW 25Hz • Head switching output point • RF Envelope output point 	<ul style="list-style-type: none"> • Play the standard test tape. 	<ul style="list-style-type: none"> • Guide roller height adjusting screw
1) Play the standard test tape after connecting the probe of oscilloscope to the RF envelope output point and the head switching output point. 2) Tracking control (playback) : Locate it at the center (Set the RF output to the maximum value via the tracking control when such adjustment is completed after the drum assembly is replaced.) 3) Height adjusting screw: Flatten the RF waveform. (Fig. C-4-2) 4) Move the tracking control (playback) to the right/left. (Fig. C-4-3) 5) Check the start and the end of the RF output reduction width are constant.		Waveform <p>Fig. C-4-2</p>	
CAUTIONS There must exist no crumpling and folding of the tape due to excess adjustment or insufficient adjustment.		Connection Diagram 	

DECK MECHANISM ADJUSTMENT

5. Audio/Control (A/C) Head Adjustment

Purpose of adjustment : To ensure that audio and control signals can be recorded and played according to the contract tract by constantly maintaining distance between tape and head, and tape tension between the P3 post and the P4 post.

5-1. Prior Adjustment (performed only when no audio output appears in play of the standard test tape)

Fixtures and tools used	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Blank Tape (Empty Tape) Driver (+) Type $\phi 5$ 	<ul style="list-style-type: none"> Play the blank tape (empty tape). 	<ul style="list-style-type: none"> Tilt adjusting screw (C) Height adjusting screw (B) Azimuth adjusting screw (A)
<p>Adjustment Procedure/Adjustment Diagrams</p> <p>1) Basically use the A/C head assembly adjusted as in SPEC.</p> <p>2) Check there is crumpling and folding of the tape around the A/C head. If it is, Turn and adjust the tilt adjusting screw to ensure that the tape corresponds to the bottom guide of the P4, and recheck the tape path after proceeding play for 4-5 seconds.</p> <p>3) Where the tape bottom is not equal to Fig. C-5-3, Adjust the height by using the height adjusting screw (B) and then readjust it by using the tilt adjusting screw (C).</p> <p>CAUTIONS</p> <p>Always check the height of the A/C head since most ideal height of A/C head can be obtained when the bottom part of the tape is away 0.2 ~ 0.25mm from the bottom part of the A/C head.</p>		
 <p>A/C Head Base</p> <p>Fig. C-5-1</p>		
 <p>A/C Head Assembly</p> <p>Fig. C-5-2</p>		

DECK MECHANISM ADJUSTMENT

5-2. Tape Path Check between Pinch Roller and Take up Guide (Check in the Rev Mode)

- Check the tape pass status between the pinch roller and the take-up guide. (Check there is crumpling of the tape pass and folding of the take-up guide.)
 - When holding of the take-up guide bottom occurs Turn the tilt adjusting screw (C) clockwise and travel it stably to ensure there is no crumpling or folding of the tape.
 - When holding of the take-up guide top occurs Turn the tilt adjusting screw (C) anti-clockwise and

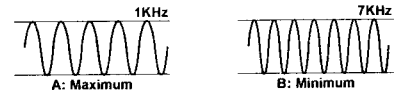
travel it stably to ensure there is no crumpling or folding of the tape.

- Check there is folding of the tape at the bottom or top of the take-up guide in cutting-off the REV mode

CAUTIONS

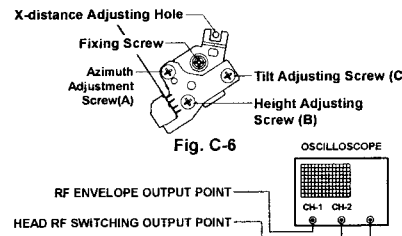
If the RF waveform is changed after adjusting the A/C head, perform fine adjustment to ensure the RF waveform is flattened.

5-3. Fine Adjustment (Azimuth Adjustment)

Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Oscilloscope Standard test tape (only for SP) Driver (+) Type $\phi 4$ 	<ul style="list-style-type: none"> Audio Output Jack 	<ul style="list-style-type: none"> Play the standard test tape, 1KHz, 7KHz. 	<ul style="list-style-type: none"> Azimuth Adjusting Screw (A) Height Adjusting Screw (B)
<p>Adjustment Procedure</p> <p>1) Connect the probe of Oscilloscope to the audio output jack.</p> <p>2) Ensure that Audio 1KHz, 7KHz output is flattened at the maximization point by adjusting the Azimuth adjusting screw (A).</p>			
 <p>Fig. C-5-4</p>			

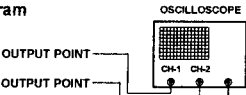
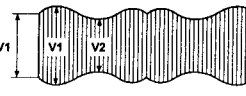
6. X-distance Adjustment

Purpose of adjustment : To maintain compatibility with other VCR (VCP).

Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Oscilloscope Standard test tape (only for SP) Driver (+) Type $\phi 4$ 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: NTSC ; SW 30Hz PAL:SW 25Hz Head switching output point RF Envelope output point 	<ul style="list-style-type: none"> Play the standard test tape. 	<p>Left Right</p> <p>Grove of Base A/C</p>
<p>Adjustment Procedure</p> <p>1) After releasing the auto tracking, lightly turn the fixing screw. Turn the (+) type driver ($\phi 3 \sim \phi 4$) on the X-distance adjusting hole to the right or left. Adjust the RF envelope level to the maximum point and then fix the fixing screws.</p> <p>2) For the 31mm head, adjust it with the SP tape recorded in the width of 31mm since the head travels on the tape track only for SP with the width of 58mm.</p>			
<p>Connection Diagram</p>  <p>Fig. C-6</p>			

DECK MECHANISM ADJUSTMENT

7. Adjustment after Drum Assembly (Video Heads)

Purpose of adjustment : To adjust and stabilize the height change, X-distance change, etc depending on the guide roller after assembling the drum.			
Fixtures and tools used	Connection position	VCR (VCP) status	Adjustment position
<ul style="list-style-type: none"> Oscilloscope Standard test tape (only for SP) Post Height Adjusting Driver Driver (+) Type Ø 5 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: NTSC : SW 30Hz PAL:SW 25Hz Head switching output point RF Envelope output point 	<ul style="list-style-type: none"> Play the blank tape. Play the standard test tape. 	<ul style="list-style-type: none"> Fine adjustment of guide roller Switching Point Tracking Preset X-distance
Checking/Adjustment Procedure 1) Play the blank tape (empty tape) and check whether the guide roller crumbles or wrinkles the tape and adjust it if necessary. 2) Check that the RF envelope output waveform is flat, and adjust the height of the guide roller while playing the standard test tape. 3) Adjust the switching point. 4) Check the RF envelope output is the maximum when the tracking control locates at the center. If not maximum, set up to ensure that RF envelope output becomes the maximum by turning the (+) type driver (Ø 3 ~ Ø 4) on the base A/C groove.		Connection Diagram  Waveform  V1/V MAX = 0.7 V1/V MAX = 0.8 RF ENVELOPE OUTPUT	

8. Check of Traveling Device after Deck Assembly

8-1. Audio, RF Normalization Time (Locking Time) Check in Play after CUE or REV

Fixtures and tools used	Measuring standard	Connection position	VCR (VCP) status
<ul style="list-style-type: none"> Oscilloscope 6H 3KHz Color Bar Standard Test tape Stop Watch 	<ul style="list-style-type: none"> RF Locking Time: Within 5 seconds Audio Locking Time : Within 10 seconds 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: Audio output RF Envelope output point Audio output jack 	<ul style="list-style-type: none"> Play the 6H 3KHz Color Bar Standard Test tape.
Checking Procedure 1) Check that locking time of the RF and Audio waveform is fallen within the measuring standard in conversion of the play mode from the CUE or the REV mode. 2) Readjust the paragraph 5 and 6 if it deviates from the standard.			

8-2. Check of Tape Curl and Jam Status

Fixtures and tools used	Fixtures and tools used	Fixtures and tools used
<ul style="list-style-type: none"> T-160 Tape T-120 Tape 	<ul style="list-style-type: none"> There must be no jam or curl at the first, middle and end position of tape. 	<ul style="list-style-type: none"> Travel the tape at the position of its first and end.
Checking Procedure 1) Check there is no abnormality of every traveling post status. 2) There must be no abnormal operation of the counter in occurrence of folding of the bottom tape. There must be not abnormality of audio signal in damage of the top tape. 3) If there is abnormality, readjust the adjustment paragraph 4 and 5.		

PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

1. Checking Points prior to Repair

Following abnormal phenomena may be repaired by removal of foreign materials and oil supply. Check oiling is required at the checking set or cleaning status is complete. Determine that necessity of checking and repair the set exists after checking the using period of the set together with the user. In this case, followings must be checked:

Phenomena	Checking Points and Cause	Replacement
Color beat	Pollution of Full-Erase Head	o
S/N, Color Faded	Pollution of Video Head	o
Horizontal, Vertical Jitter	Pollution of Video Head or Tape Transport System	o
Poor Sound, Low Sound	Pollution of Audio/Control Head	o
No tape wound or tape wound loosely, FF or REV impossible, or slow turning	Pollution of Pinch Roller or Belt Capstan Belt	o
Tape loosely wound in REV or Unloading	Deterioration of Clutch Assembly D37 Torque Pollution of Drum and Traveling Device	o Fig. C-9-3

CAUTIONS

If operation of the position with (O) mark is abnormal even after removing cause, replace it with substitute product since it shows damage or wearing.

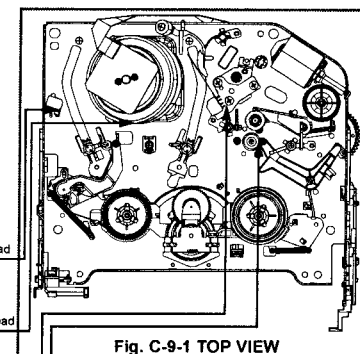


Fig. C-9-1 TOP VIEW

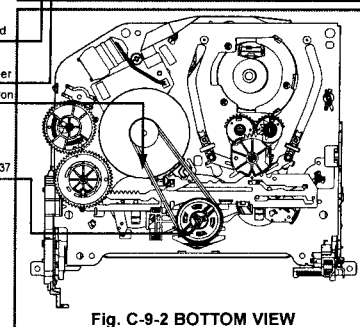


Fig. C-9-2 BOTTOM VIEW

* No. (1) ~ (12) shows sequence that the tape moves from the supply reel to the take-up reel.)

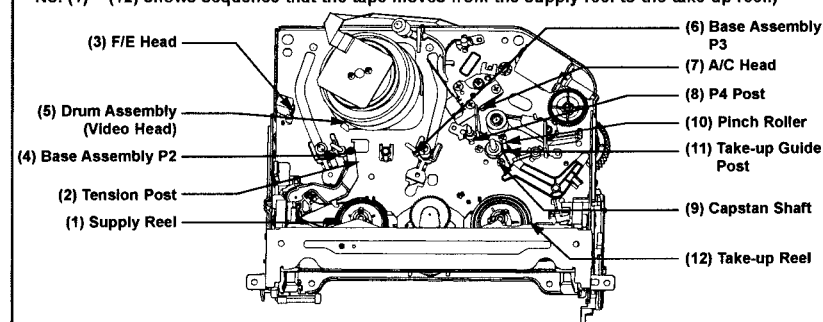


Fig. C-9-3 Tape Transport System

PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

2. Essential Check and Repair

Recording density of the video is far higher than the audio. Therefore video parts are very precise so as to allow only error of 1/1000mm or so in order to maintain compatibility with other videos.

If one of these parts is polluted or old, same phenomena will appear as they are damaged.

To maintain clear screen, regular check, replacement of old and damaged parts and oil supply, etc are essential.

3. Regular Check and Repair

Check and repair schedule is not constant since they vary depending on method that the consumer uses video and environment where the video is installed at. However, for the video used by common household, good screen will be maintained if regular check and repair per 1,000 hour is performed. The following chart shows relationship between using time and checking time:

Table 1

Time Requiring Checking	About 1 year	About 18 months	About 3 years
Average hours used per day			
One hour			
Two hours			
Three hours			

4. Tools for Check and Repair

- (1) Grease: Floil G-3114 (KANTO) or equivalent grease (Green)
- (2) Grease: Kanto G-754, PL-433 (Yellow)
- (3) Alcohol (Isopropyl Alcohol)
- (4) Cleaning Patch (cloth)

5. Maintenance Process

5-1) Removal of Foreign Material

- (1) Removal of foreign material from video head (Fig. C-9-4)
Firstly try to use a cleaning tape.
Use a cleaning patch if foreign materials are not removed with the cleaning tape due to severe dirty of the head. Soak the cleaning patch in alcohol and put it to the head tip. Smoothly turn the drum (turning cylinder) to the right or left (In this case, the cleaning patch must not be moved vertically).
After completely drying the head, test the traveling status of the tape.
If alcohol (Isopropyl Alcohol) remains at the video head, the tape may be damaged when this solution touches with the head surface.

Never use a cloth bar (commercial safe)

- (2) Wipe the tape transport system and the drive system with the cleaning patch soaked in alcohol (Isopropyl Alcohol) when removing foreign materials from them.
1) The part touched with the traveling tape is called as tape transport system. The drive system consists of parts to travel the tape.
2) Care must be exercised so that unreasonable force to change the pattern will be applied to the tape transport system during removal of foreign materials.

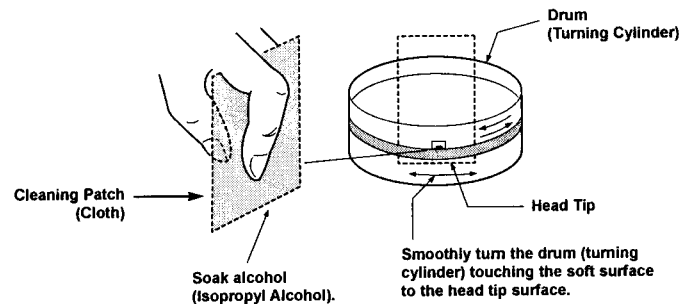


Fig. C-9-4

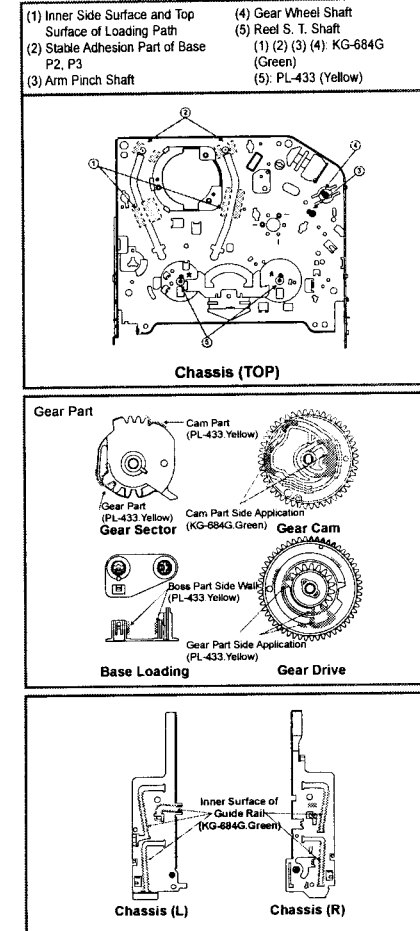
PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

5-2) Grease Applications

(1) Grease Application Method

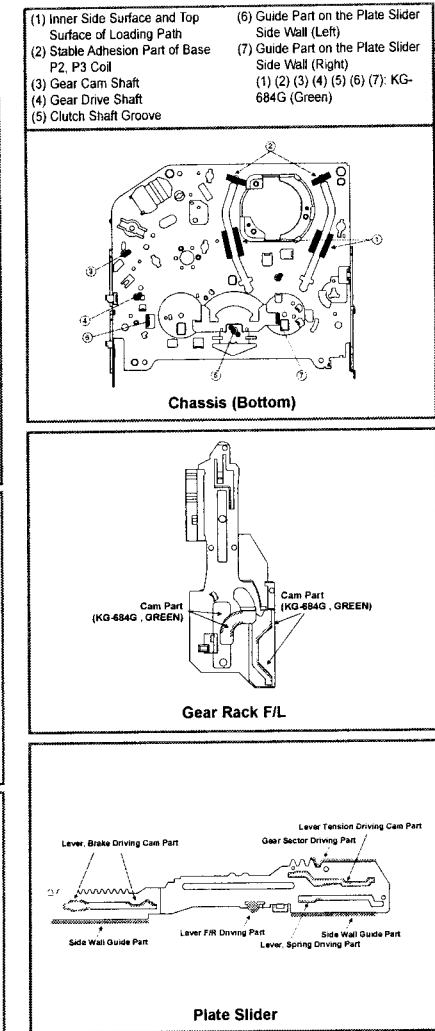
Apply grease by using a cloth swab or brush. Care must be exercised so that excess quantity should not be used. If the excessive quantity is applied, wipe it with the gauze soaked in alcohol (Isopropyl Alcohol).

NOTE: POSITION OF GREASE APPLICATION



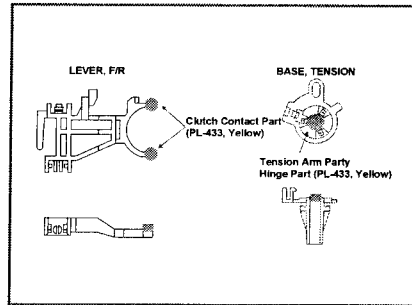
(2) Regular Grease Application

Apply grease to the designated application position every 500 hour.

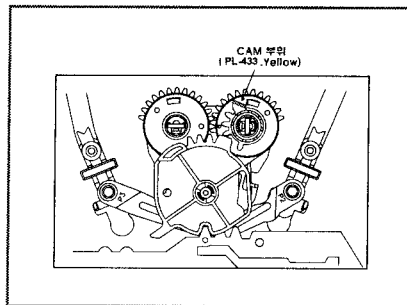


PROTECTION, MAINTENANCE AND CHECK OF VIDEO FUNCTION

Lever, F/R, Base, Tension



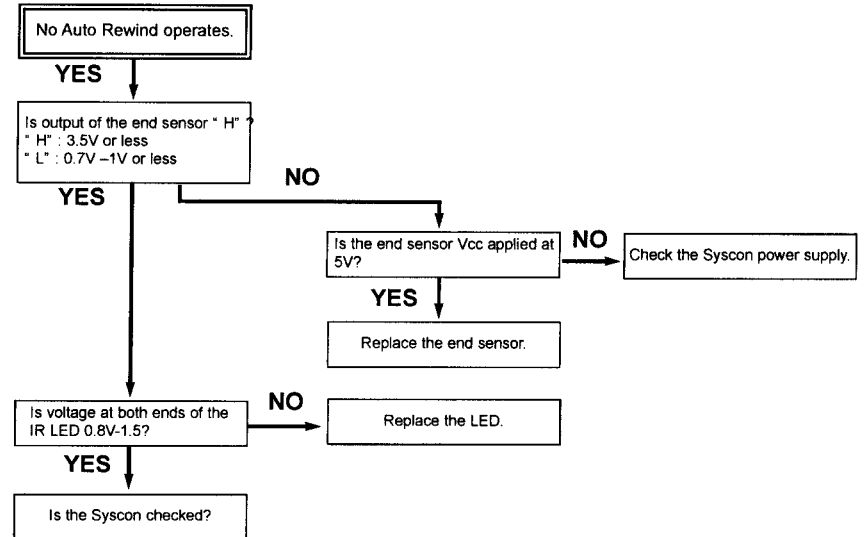
GEAR AY, P2 & P3



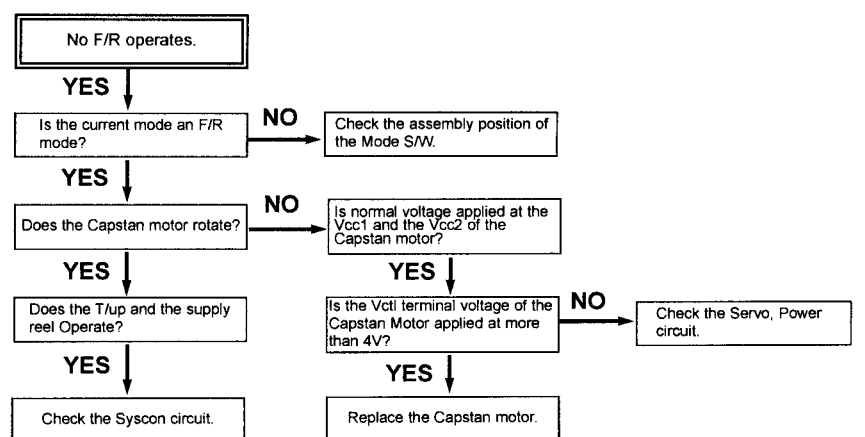
MECHANISM TROUBLESHOOTING GUIDE

1. Deck Mechanism

A.

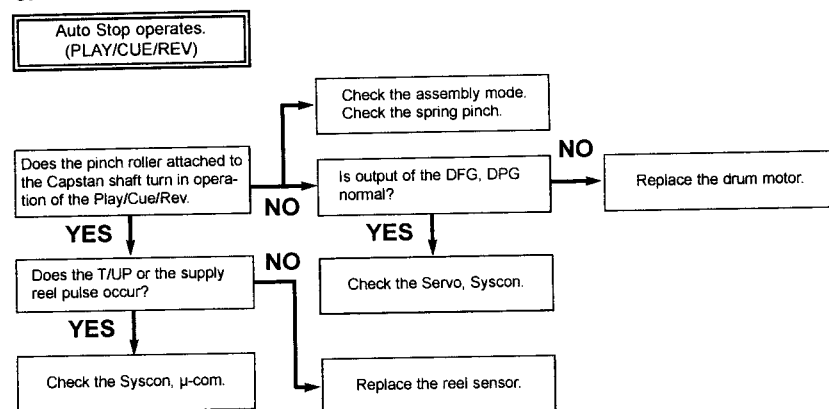


B.

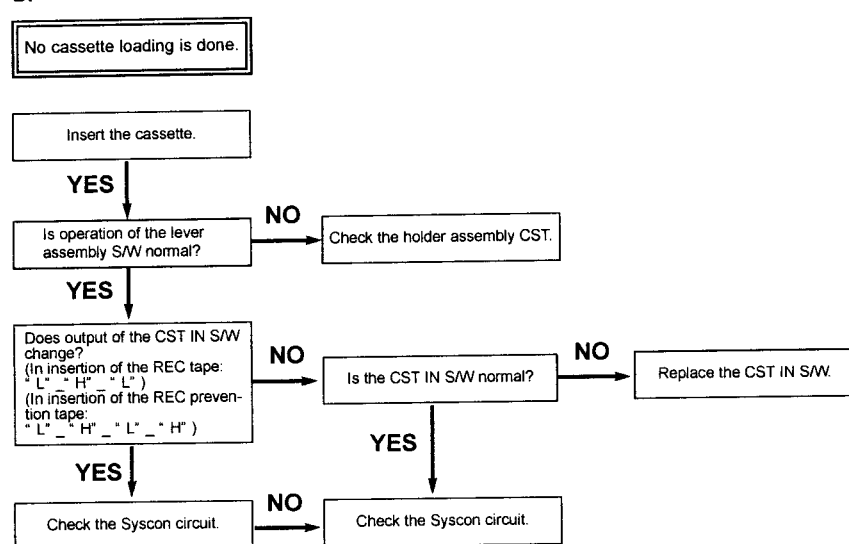


MECHANISM TROUBLESHOOTING GUIDE

C.

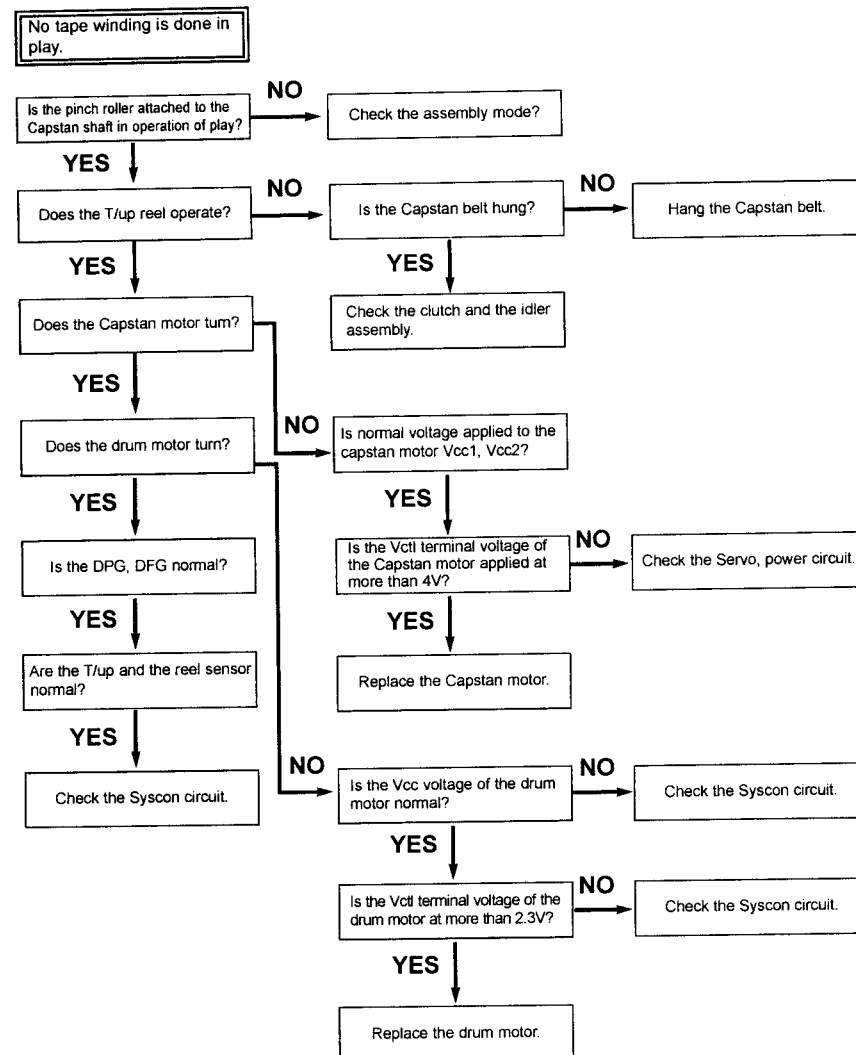


D.



MECHANISM TROUBLESHOOTING GUIDE

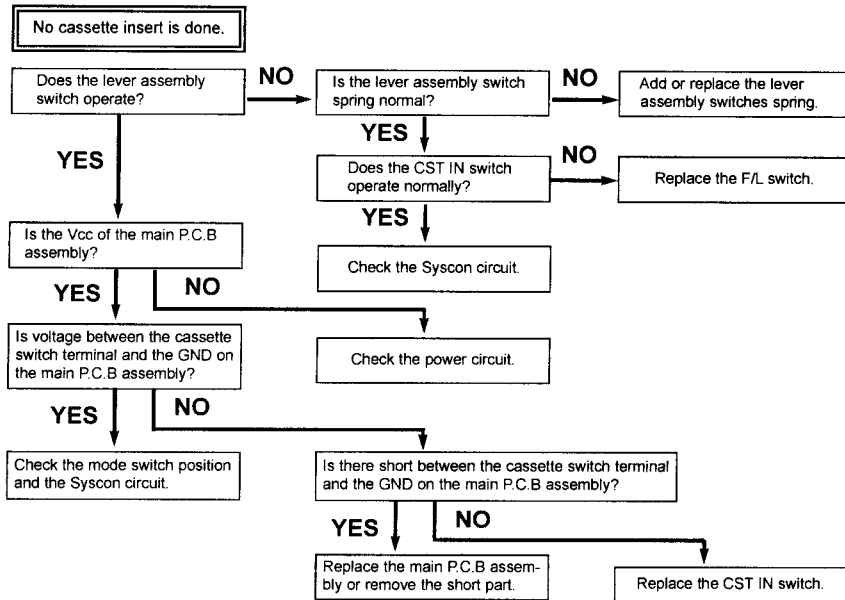
E.



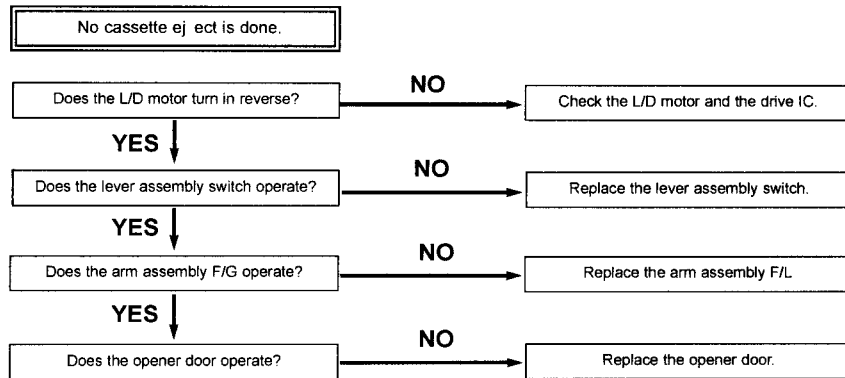
MECHANISM TROUBLESHOOTING GUIDE

2. Front Loading Mechanism

A.

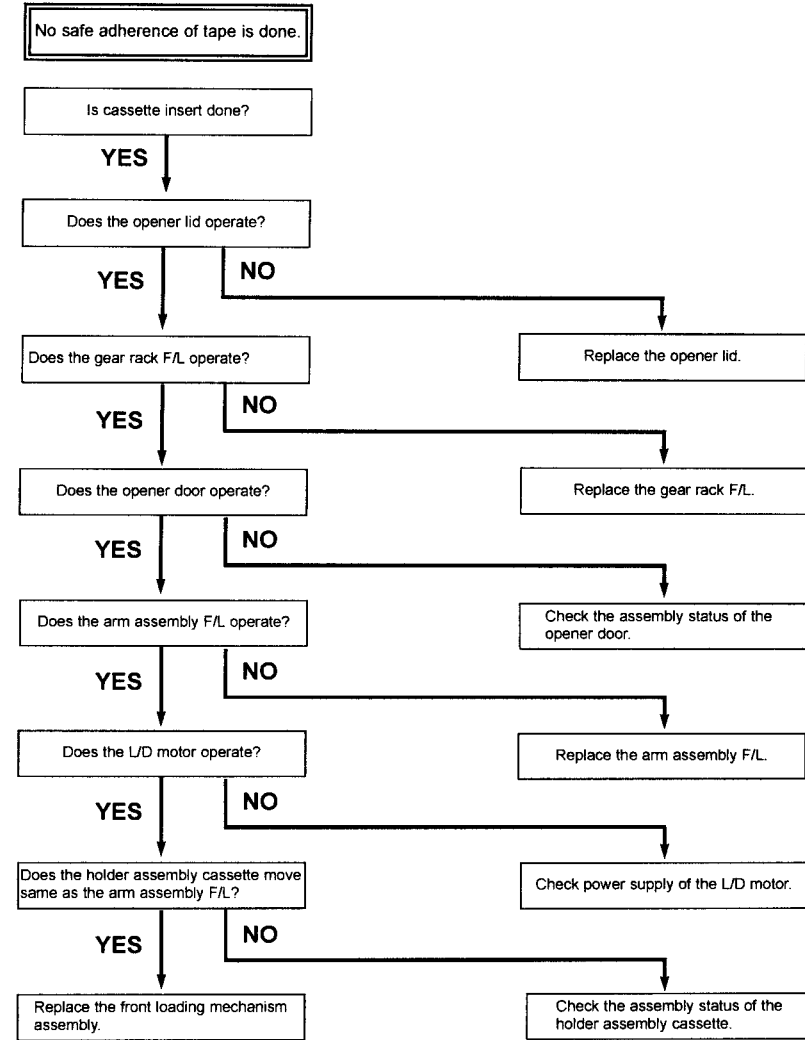


B.



MECHANISM TROUBLESHOOTING GUIDE

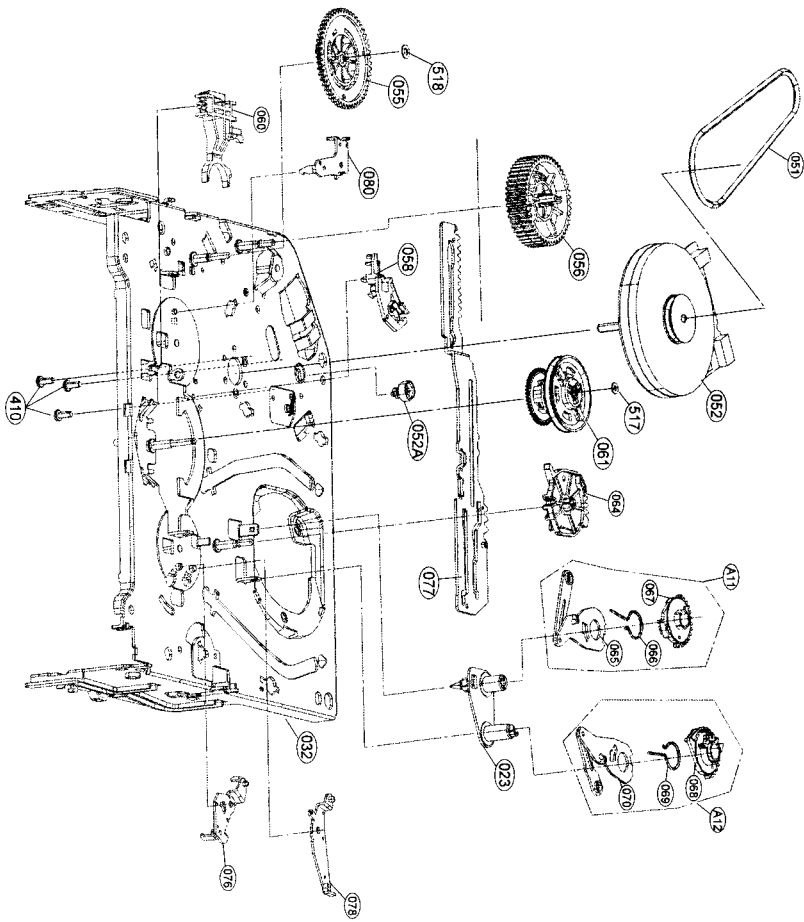
C.



EXPLODED VIEWS

3. Moving Mechanism Section (2)

MEMO



SECTION 5 MECHANISM OF DVD PART

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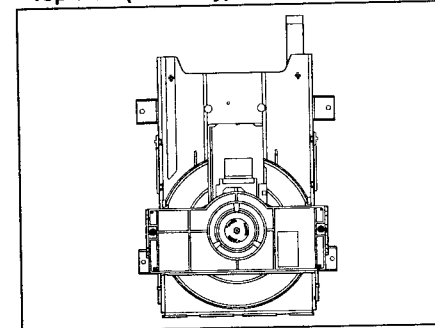
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EXPLODED VIEW

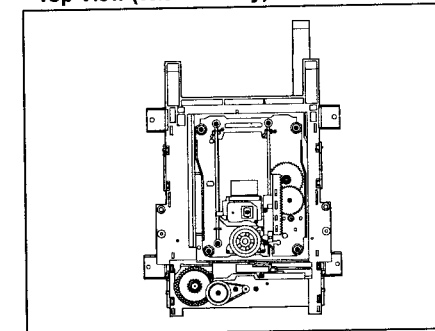
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DECK MECHANISM PARTS LOCATION

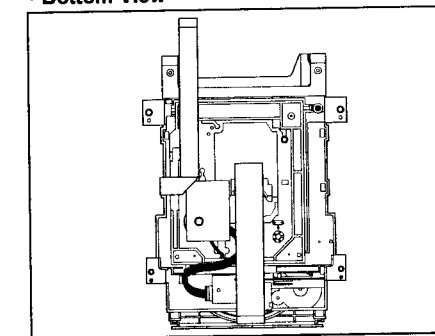
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.	Parts	Fixing Type	Disassembly	Figure
1	Holder Clamp	2 Screws, 2 Locking Tabs		5-1
1	2 Clamp Assembly Disc			5-1
1, 2	3 Plate Clamp			5-1
1, 2, 3	4 Magnet Clamp			5-1
1, 2, 3, 4	5 Clamp Upper			5-1
1	6 Tray Disc			5-2
1, 6	7 Base Assembly Sled	4 Screws,		5-3
1, 2, 6	8 Gear Assembly Feed			5-3
1, 2, 6, 8	9 Gear Middle			5-3
1, 2, 6, 8, 9	10 Gear Assembly Rack	1 Screw		5-3
1, 2, 7	11 Rubber Rear			5-3
1, 2, 7	12 Frame Assembly Up/Down	1 Screw	Bottom	5-4
1, 2	13 Belt Loading	1 Locking Tab		5-4
1, 2, 13	14 Gear Pulley			5-4
1, 2, 13, 14	15 Gear Loading	1 Locking Tab		5-4
1, 2, 7, 12, 13, 14	16 Guide Up/Down			5-4
1, 2, 13	17 PWB Assembly Loading	1 Locking Tab 1 Hook 2Screw	Bottom	5-4
1, 2, 7, 12, 13, 14, 15, 16, 17	18 Base Main			5-4

Note

When reassembling, perform the procedure in reverse order.

The "Bottom" on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY

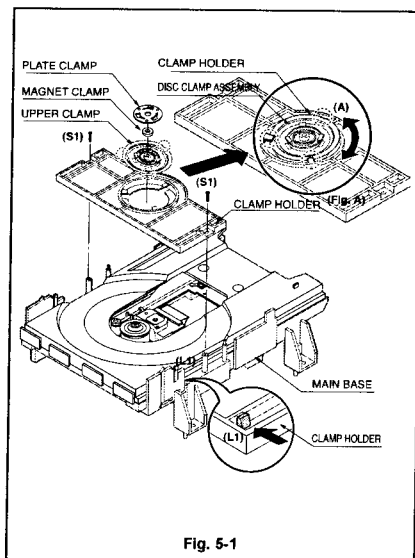


Fig. 5-1

1. Holder Clamp (Fig. 5-1)

- 1) Release 2 Screws(S1).
- 2) Unhook 2 Locking Tabs(L1).
- 3) Lift up the Holder Clamp and then separate it from the Base Main.

1-1. Clamp Assembly Disc

- 1) Place the Clamp Assembly Disc as Fig. (A).
- 2) Lift up the Clamp Assembly Disc in direction of arrow(A).
- 3) Separate the Clamp Assembly Disc from the Holder Clamp.

1-1-1. Plate Clamp

- 1) Turn the Plate Clamp to counterclockwise direction and then lift up the Plate Clamp.

1-1-2. Magnet Clamp

1-1-3. Clamp Upper

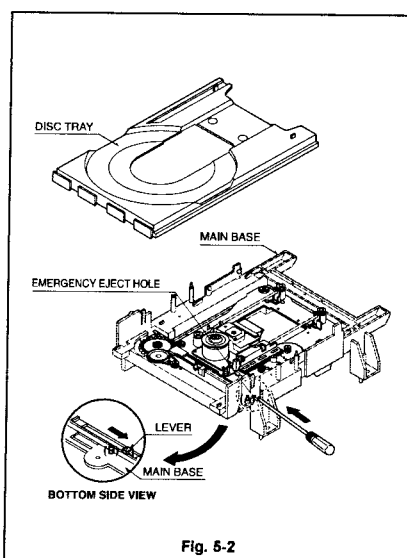


Fig. 5-2

2. Tray Disc (Fig. 5-2)

- 1) Insert and push a Driver in the emergency eject hole(A) at the right side, or put the Driver on the Lever(B) of the Gear Emergency and pull the Lever(B) in direction of arrow so that the Tray Disc is ejected about 15~20mm.
- 2) Pull the Tray Disc until it is separated from the Base Main completely.

DECK MECHANISM DISASSEMBLY

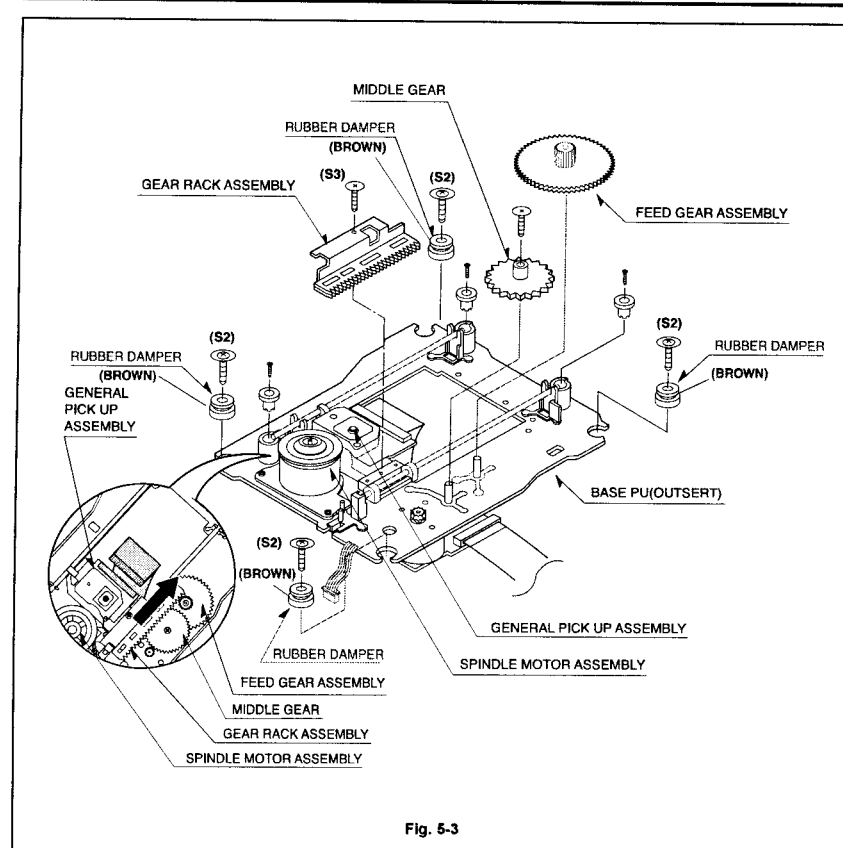


Fig. 5-3

3. Base Assembly Sled (Fig. 5-3)

- 1) Release 4 Screw(S2).
- 2) Disconnect the FFC Connector(C1).

3-1. Gear Assembly Feed

3-2. Gear Middle

3-3. Gear Assembly Rack

- 1) Release the Screw(S3)

4. Rubber Rear (Fig. 5-3)

DECK MECHANISM DISASSEMBLY

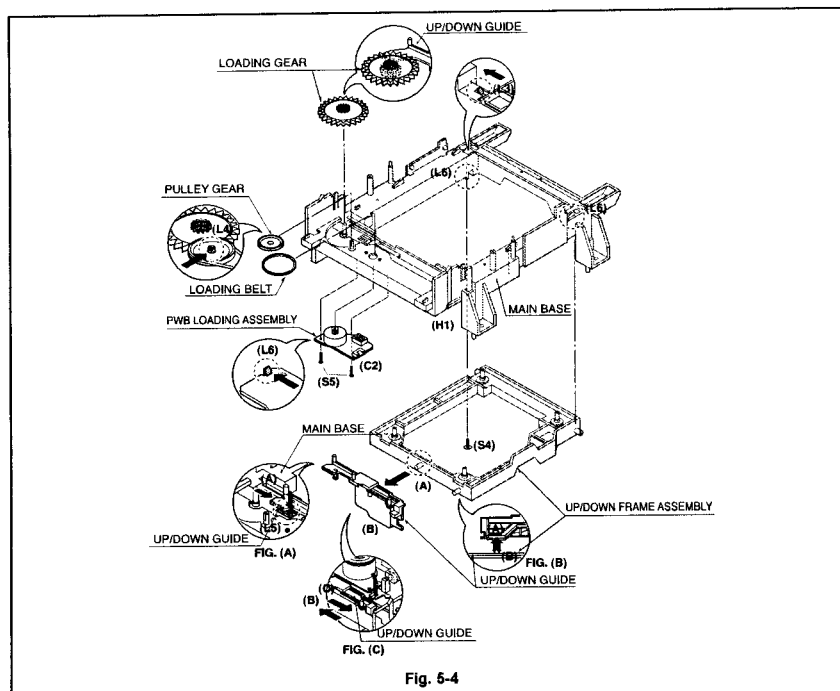


Fig. 5-4

5. Frame Assembly Up/Down (Fig. 5-4)**Note**

Put the Base Main face down (Bottom Side)

- 1) Release the Screw (S4)
- 2) Unlock the Locking Tab (L3) in direction of arrow and then lift up the Frame Assembly Up/Down to separate it from the Base Main.

Note

- When reassembling move the Guide Up/Down in direction of arrow (C) until it is positioned as Fig. (C).
- When reassembling insert (A) portion of the Frame Assembly Up/Down in the (B) portion of the Guide Up/Down as Fig. (B)

6. Belt Loading (Fig. 5-4)**Note**

Put the Base Main on original position (Top Side)

7. Gear pulley (Fig. 5-4)

- 1) Unlock the Locking Tab (L4) in direction of arrow (B) and then separate the Gear Pulley from the Base Main.

8. Gear Loading (Fig. 5-4)**9. Guide Up/Down (Fig. 5-4)**

- 1) Move the Guide Up/Down in direction of arrow (A) as Fig. (A)
- 2) Push the Locking Tab (L5) down and then lift up the Guide Up/Down to separate it from the Base Main.

Note

When reassembling place the Guide Up/Down as Fig. (C) and move it in direction arrow (B) until it is locked by the Locking Tab (L5). And confirm the Guide Up/Down as Fig. (A)

10. PWB Assembly Loading (Fig. 5-4)**Note**

Put the Base Main face down (Bottom Side)

- 1) Release 2 Screws (S5)
- 2) Unlock the Loading Motor (C2) from the Hook (H1) on the Base Main.
- 3) Unlock 2 Locking Tabs (L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main (Fig. 5-4)

SECTION 5 MECHANISM OF DVD PART

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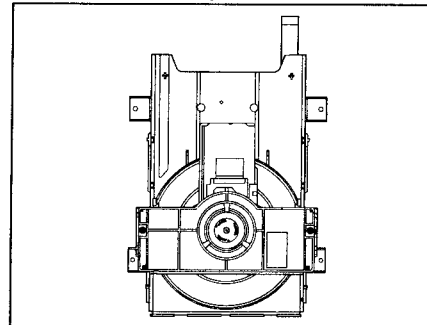
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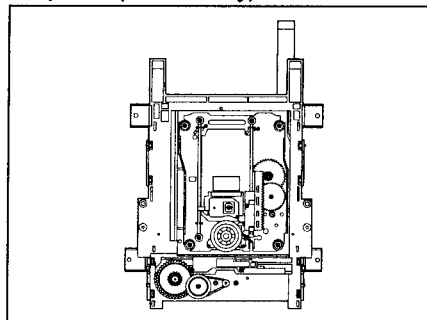
1. Deck Mechanism Exploded View....5-5

DECK MECHANISM PARTS LOCATION

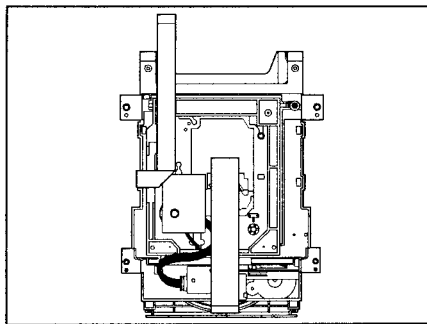
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.	Parts	Fixing Type	Disassembly	Figure
1	Holder Clamp	2 Screws, 2 Locking Tabs		5-1
1	2 Clamp Assembly Disc			5-1
1, 2	3 Plate Clamp			5-1
1, 2, 3	4 Magnet Clamp			5-1
1, 2, 3, 4	5 Clamp Upper			5-1
1	6 Tray Disc			5-2
1, 6	7 Base Assembly Sled	4 Screws,		5-3
1, 2, 6	8 Gear Assembly Feed			5-3
1, 2, 6, 8	9 Gear Middle			5-3
1, 2, 6, 8, 9	10 Gear Assembly Rack	1 Screw		5-3
1, 2, 7	11 Rubber Rear			5-3
1, 2, 7	12 Frame Assembly Up/Down	1 Screw	Bottom	5-4
1, 2	13 Belt Loading	1 Locking Tab		5-4
1, 2, 13	14 Gear Pulley			5-4
1, 2, 13, 14	15 Gear Loading	1 Locking Tab		5-4
1, 2, 7, 12, 13, 14	16 Guide Up/Down			5-4
1, 2, 13	17 PWB Assembly Loading	1 Locking Tab 1 Hook 2Screw	Bottom	5-4
1, 2, 7, 12, 13, 14, 15, 16, 17	18 Base Main			5-4

Note

When reassembling, perform the procedure in reverse order.

The " Bottom" on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY

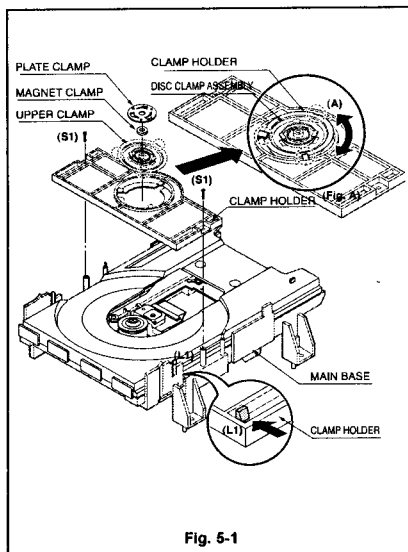


Fig. 5-1

1. Holder Clamp (Fig. 5-1)

- 1) Release 2 Screws(S1).
- 2) Unhook 2 Locking Tabs(L1).
- 3) Lift up the Holder Clamp and then separate it from the Base Main.

1-1. Clamp Assembly Disc

- 1) Place the Clamp Assembly Disc as Fig. (A).
- 2) Lift up the Clamp Assembly Disc in direction of arrow(A).
- 3) Separate the Clamp Assembly Disc from the Holder Clamp.

1-1-1. Plate Clamp

- 1) Turn the Plate Clamp to counterclockwise direction and then lift up the Plate Clamp.

1-1-2. Magnet Clamp

1-1-3. Clamp Upper

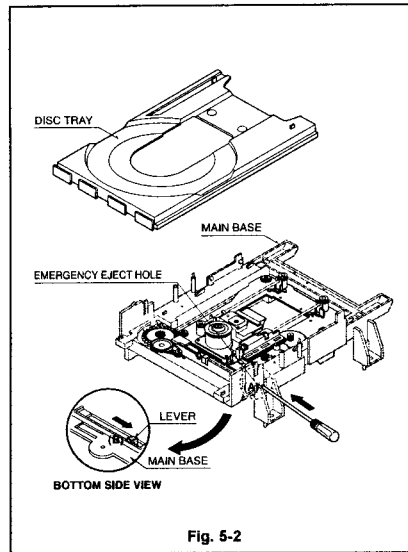


Fig. 5-2

2. Tray Disc (Fig. 5-2)

- 1) Insert and push a Driver in the emergency eject hole(A) at the right side, or put the Driver on the Lever(B) of the Gear Emergency and pull the Lever(B) in direction of arrow so that the Tray Disc is ejected about 15~20mm.
- 2) Pull the Tray Disc until it is separated from the Base Main completely.

DECK MECHANISM DISASSEMBLY

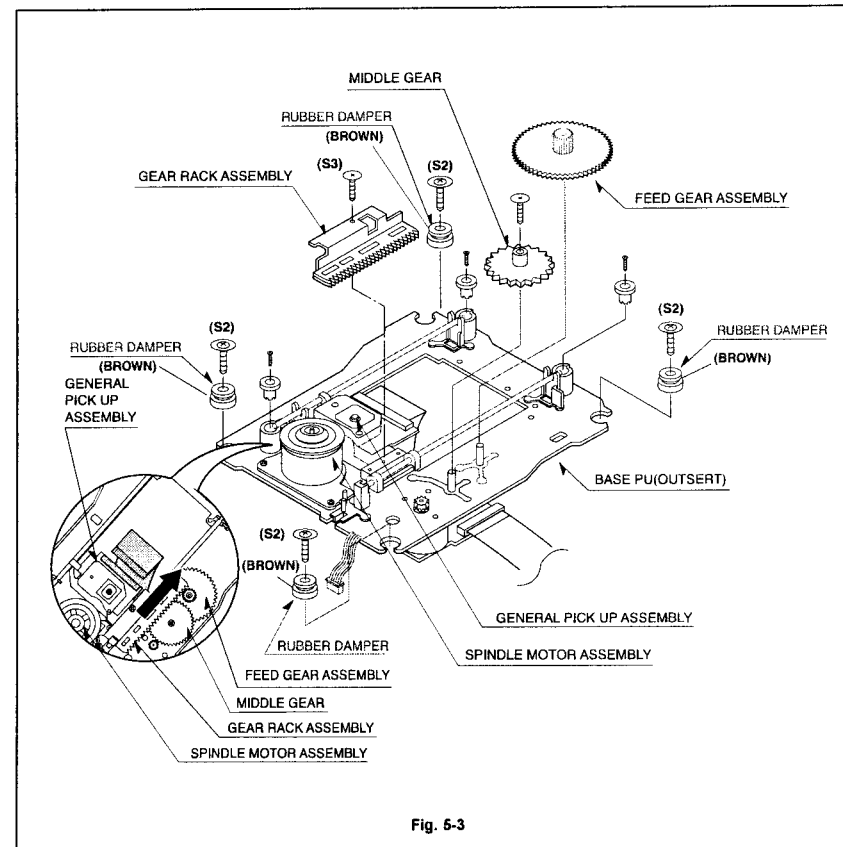


Fig. 5-3

3. Base Assembly Sled (Fig. 5-3)

- 1) Release 4 Screw(S2).
- 2) Disconnect the FFC Connector(C1).

3-1. Gear Assembly Feed

3-2. Gear Middle

3-3. Gear Assembly Rack

- 1) Release the Screw(S3)

4. Rubber Rear (Fig. 5-3)

DECK MECHANISM DISASSEMBLY

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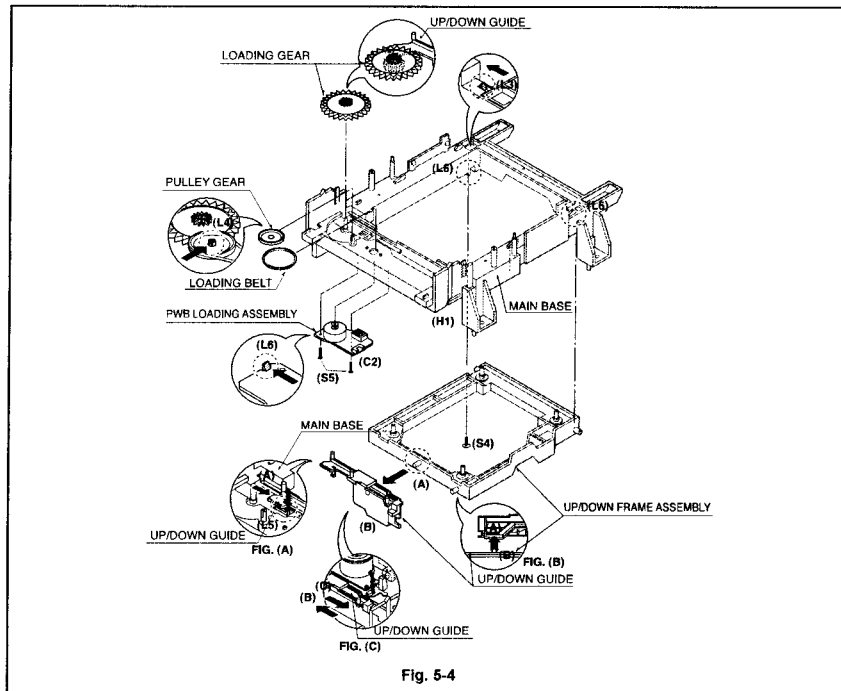


Fig. 5-4

5. Frame Assembly Up/Down (Fig. 5-4)

Note

1) Release the Screw(S4)

- 2) Unlock the Locking Tab(L3) in direction of arrow and then lift up the Frame Assembly Up/Down to separate it from the Base Main.

Note

- When reassembling move the Guide Up/Down in direction of arrow(C) until it is positioned as Fig.(C).
- When reassembling insert (A) portion of the Frame Assembly Up/Down in the (B) portion of the Guide Up/Down as Fig.(B)

6. Belt Loading(Fig. 5-4)

Note

Put the Base Main on original position(Top Side)

7. Gear pulley (Fig. 5-4)

- 1) Unlock the Locking Tab(L4) in direction of arrow(B) and then separate the Gear Pulley from the Base Main.

8. Gear Loading (Fig. 5-4)

9. Guide Up/Down (Fig. 5-4)

- 1) Move the Guide Up/Down in direction of arrow(A) as Fig.(A)
- 2) Push the Locking Tab(L5) down and then lift up the Guide Up/Down to separate it from the Base Main.

Note

When reassembling place the Guide Up/Down as Fig.(C) and move it in direction arrow(B) until it is locked by the Locking Tab(L5). And confirm the Guide Up/Down as Fig.(A)

10. PWB Assembly Loading (Fig. 5-4)

Note

Put the Base Main face down(Bottom Side)

- 1) Release 2 Screws(S5)
- 2) Unlock the Loading Motor (C2) from the Hook (H1) on the Base Main.
- 3) Unlock 2 Locking Tabs(L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main(Fig. 5-4)